913.388
Pat.

GOVERNMENT OF INDIA
DEPARTMENT OF ARCHAEOLOGY
CENTRAL ARCHAEOLOGICAL LIBRARY

CLASS

CALL NO. 913.38[illegible] Per

D.G.A. 79.

SKRIFTER UTGIVNA AV
KUNGL. HUMANISTISKA VETENSKAPSSAMFUNDET
I LUND

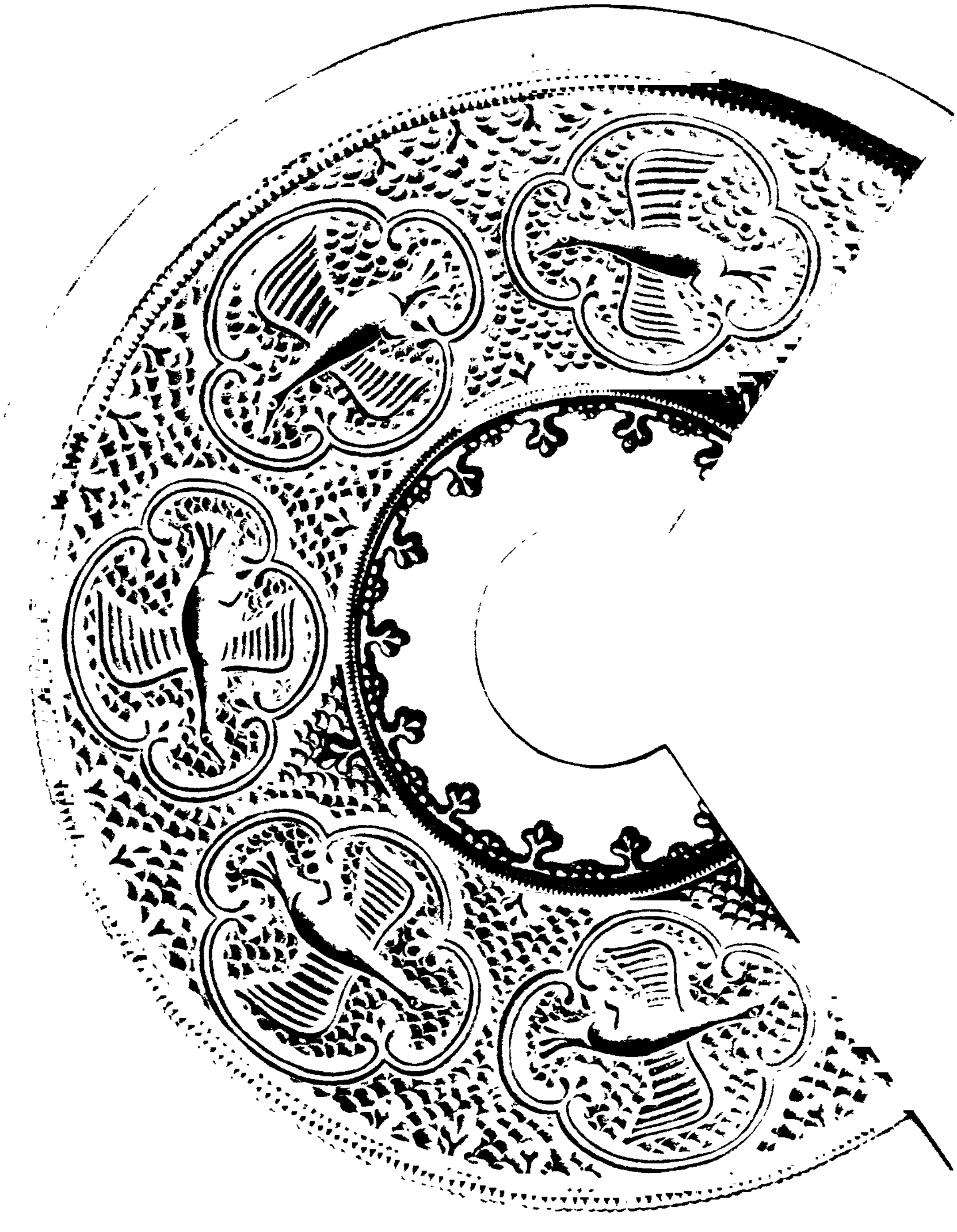
ACTA REG. SOCIETATIS HUMANIORUM LITTERARUM LUNDENSIS

XXXIV.

14644.

AXEL W. PERSSON

NEW TOMBS AT DENDRA
NEAR MIDEA



NEW TOMBS AT DENDRA NEAR MIDEA

BY

AXEL W. PERSSON

PROFESSOR OF CLASSICAL ARCHAEOLOGY AND ANCIENT HISTORY IN THE UNIVERSITY OF UPPSALA,
SATHER PROFESSOR OF CLASSICAL LITERATURE IN THE UNIVERSITY OF CALIFORNIA 1940–41,
MEMBER OF THE R. ACADEMY OF LETTERS, HISTORY, AND ANTIQUITIES, STOCKHOLM,
OF THE R. SOCIETIES OF LETTERS OF LUND AND OF UPPSALA,
HON. MEMBER OF THE ARCHAEOLOGICAL SOCIETY OF ATHENS

WITH 8 PLATES, AND 139 FIGURES IN THE TEXT

3 23

SOCIETAS HUMANIORUM LITTERARUM LUNDENSIS 1918

LUND, C. W. K. GLEERUP
LEIPZIG O. HARRASSOWITZ
LONDON HUMPREY MILFORD
OXFORD UNIVERSITY PRESS
1942

CENTRAL ARCHAEOLOGICAL
[illegible] HI.
Acc. No. [illegible]
Date 14 [illegible]

This work is published with the aid of a grant from the Humanistic Foundation.

[illegible] AL
85

Printed in Sweden

Copyright by Kungl. Humanistiska Vetenskapssamfundet i Lund

LUND 1943
BERLINGSKA BOKTRYCKERIET

MARTINO P. NILSSON

PRAECEPTORI AMICO

A. D. IV ID. IVL. ANNO MCMXXXIX

DEDICATUM

Contents.

Page
Introduction 1
I. Midea 3
The fortress-wall 3
The acropolis 6
The shafts 13
II. The Necropolis 17
Chamber Tomb No. 6 20
Chamber Tomb No. 7 31
Chamber Tomb No. 8 37
Chamber Tomb No. 9 51
Chamber Tomb No. 10 59
Chamber Tomb No. 11 95
III. Some remarks concerning the finds .. 102
1. Minoan-Mycenaean lamps 102
2. The wooden coffin 111
3. The bronze helmet, a new Mycenaean helmet type 120
Page
4. The boars' tusks helmet 126
5. Origin of the Ionic capital 129
6. The gold ring 132
7. Translation of metal forms to pottery 135
8. Silver vase with representation of birds 137
9. Importation or local manufacture 141
VI. General remarks 152
V. Origin of the Mycenaean Chamber tomb 164
VI. Mycenae and Egypt, direct contacts in Early and Middle Mycenaean age . 176

APPENDIX

Chemical analyses, by G. HÄGG ... 197
INDEX 199

List of Plates.

FRONTISPIECE. The Birds vase. Drawing by Amanuens A. FRIDELL
Plate
I. 1, 2. The bronze helmet from Chamber Tomb No. 8.
II. 1, 2. Ivory mountings from Chamber Tomb No. 8.
III. Golden objects and gems from Shaft I in Chamber Tomb No. 10.
IV. 1, 2. The golden cup from Chamber Tomb No. 10.
V. Gold necklaces and beads from Chamber Tomb No. 10.
Plate
VI. 1. The Birds vase from Chamber Tomb No. 10, retouched.
2. Shallow saucer of silver with gold rim from Chamber Tomb No. 10.
VII. 1, a. Gold ring from Chamber Tomb No. 10.
b, c. Drawings of the bezel of the ring.
2, a. Three-sided sealstone from Chamber Tomb No. 10.
b, c. Photographs of impressions.
3, a. Sealstone from Chamber Tomb No. 10.
b. Photograph of impression.
c. Drawing of original representation.

Introduction.

PLANS had been made for the continuation in the spring of 1939 of the excavations at Mylassa in Turkey commenced the preceding year by the Swedish Caria Committee whose president is H. R. H. The Crown Prince of Sweden, and whose field director is the present author. Accordingly an expedition left Sweden at the beginning of March comprising the following members: Dr T. Säve-Söderbergh, Fil. mag. Ingel Bonde, now Mrs B. E. Nystedt, Miss Siv Löfqvist, now Mrs K. E. Belfrage, Mr B. Almgren, Mr I. Niklasson, all from Uppsala, Fil. mag. Bo Svensson from Gothenburg, Mag. phil. Mogens Gjödesen from Copenhagen, Mr Viggo Groundstroem from Helsingfors together with the author as leader and director. Upon our arrival in Turkey, however, it appeared that the Turkish authorities for reasons of the actual threat of war between their country and Italy were compelled to cancel our excavation permit as Mylassa lay within the military zone.

The find material from the previous excavations was transferred to Smyrna, thanks to the Turkish authorities, and there it underwent a provisional conservation process and examination which occupied us for 5 weeks. Through the kind intercession of H. R. H. the Crown Prince we obtained permission to use a part of our funds for a smaller excavation in Greece instead of the projected season in Turkey. The Greek government immediately issued, with customary willingness, an excavation permit to dig at Dendra-Midea. Thus, in the beginning of May we could set spade in the soil adjoining the rich area which yielded the magnificent finds from the Royal Tombs in 1926 and 1927. The field-work was destined to cover seven weeks.

Some trial trenches were made upon the hilltop where Mideas stronghold is situated. Lic. Säve-Söderbergh was in immediate charge of this operation and his notebook provides the basis of the first section of this publication. The main interest, however, was directed towards the Mycenaean necropolis. Even upon this occasion luck favoured us and we made so many rich finds that they demand a specially detailed treatment. Together with the five chamber tombs excavated in 1939 a similar tomb is included examined in 1937 when the main work, as yet unpublished, was undertaken at Berbati. The necessary funds for the undertaking of this excavation were provided through the generosity of Consul Ivar P:son Henning, Hälsingborg.

We have kept throughout the enumeration of chamber tombs established at Dendra. Tombs 1—3 are published in *The Royal Tombs at Dendra near Midea. Skrifter utgivna* *in Kungl. Humanistiska Vetenskapssamfundet i Lund*, No. XV, Lund 1931. Tombs 4—5, hitherto unpublished, were excavated in the autumn of 1927 by Mr N. Bertos, then Ephoros of Argolis. The tombs published here follow in order, No. 6 excavated in 1937, and No.s 7—11, excavated in 1939. The presence of other tombs in the same necropolis has been definitely confirmed.

The technical preservation of the rich finds from the last excavations could not be immediately undertaken on the site. After consultation with H. R. H. the Crown Prince and after the necessary means had been procured through his kind offices, it was decided to devote the whole of September and the first half of October 1939 to these processes. When the necessary preparations had been made I had to journey to Berlin for the latter half of August in order to take part in the Archaeological Congress. It was my intention to rejoin my co-workers there and proceed to Greece. The outbreak of war, however, prevented this and I had to return to Sweden. When conditions became relatively stable we decided in spite of the political situation to proceed at the beginning of November with the work of conservation, particularly of the silver and bronze objects which were liable to suffer from the humidity of the approaching winter season. This work was undertaken during a sojourn in Nauplion from 15 November—15 December 1939. Mr H. Gelin of the University Museum, Uppsala, accompanied me as technical expert. The highly responsible task of cleaning and preserving the metal objects fell to his lot. We also had the good fortune of obtaining invaluable assistance from Mr Toulis Souidos of the Swedish Cyprus Museum, Stockholm, in the preservation and reconstruction of pottery fragments — the political situation forced him to return to Cyprus after the conclusion of his work. Mrs Siv Belfrage accompanied me as secretary and also assisted in the various tasks of conservation. Without such willing and talented assistance from all concerned it would have been impossible to bring the field and laboratory work involved to a successful conclusion.

The English translation of the original Swedish manuscript was made by Professor Nils Hammarstrand, Lund, and Mr John Hamilton, Downing College, Cambridge, who also made the final revision. The field photographs from the excavations of 1939 were taken by Mr Bertil Almgren. The chemical analyses were made by my collegue, Professor G. Hägg; the drawings are by Amanuens G. Fridell and Mr Erik Ståhl. To one and all I wish to express my most cordial thanks.

As the manuscript of this publication was completed in 1940 it was impossible to pay due attention to the work of A. FURUMARK, *Mycenaean Pottery. Analysis and Classification*, now published by *Kungl. Vitterhets Historie och Antikvitets Akademien*, Stockholm 1941. His *Studies in Aegean decorative Art*, published as an inaugural dissertation 1939, quoted in this publication, is reprinted in *Mycenaean Pottery*, pp. 112—235.

I. Midea.

THE ruins of the ancient Midea, to which the rock-cut tombs in the mountain ridge at Dendra no doubt belong, have been briefly mentioned in *The Royal Tombs*, p. 3 f. In connection with the excavations in the necropolis in 1939 a preliminary investigation of the remains on the fortress-height was undertaken. A sketch of this area is given here (Fig. 1) together with two different views of a model which gives an idea of the height differences.

The fortress-wall.

The wall which encloses the terraces of the acropolis on three sides, facing approximately the east, north, and west, is best preserved on either side of the eastern gate (Fig. 2). It stands here about 6 to 7 m. high. For the most part the inner face of the wall is covered by the soil of the cultivated terraces; in some instances the soil even covers the top of the wall. Consequently this condition renders impossible the accurate measurement of the thickness of the wall on the north and west sides; on the south side, where the wall is narrowest, it is about 5 ½ m. thick; on the north, where it is broadest, it appears to measure almost 7 m.

The wall nowhere runs absolutely straight, but follows the natural contours of the rock, running along in wide, gentle curves. In the northern corner, the extreme section projects somewhat beyond the face of the wall. The eastern corner immediately adjoins a crag; the outermost blocks having fallen down, it is impossible to ascertain the original shape of the corner. Possibly the wall originally extended another 5 to 10 m. southwards; here, however, is a rocky slope which made the erection of a wall superfluous.

The eastern gate was cleared for it had been greatly obscured by fallen blocks of stone. Here a section of the wall north of the gateway still stands to a height of 6 m.[1]. The outermost part of this section contiguous to the gate-way, however, was so badly damaged, that the width of the gate could not be ascertained before clearance. But when the earth and fallen blocks had been removed, its lines of demarcation became plainly visible. The gateway broadens inwards; it is 2 m. wide at the external surface of the wall and 2.30 m. at its inner. It is paved with rather thick irregular stone slabs which rest on an uneven bed of stones with earth filling. The road which runs out through the gateway must have descended the slope at a steep gradient but it cannot be traced outside the wall, where a high step has now formed. Hardly any traces are visible of the ramp that once led up to the gateway, but the configuration of the ground indicates that it must have ascended from the northwest in the customary manner, so that the unshielded right flank of the attackers was presented to the wall.

---

[1] Cf. Persson, *The royal Tombs at Dendra near Midea*, p. 5, fig. 2

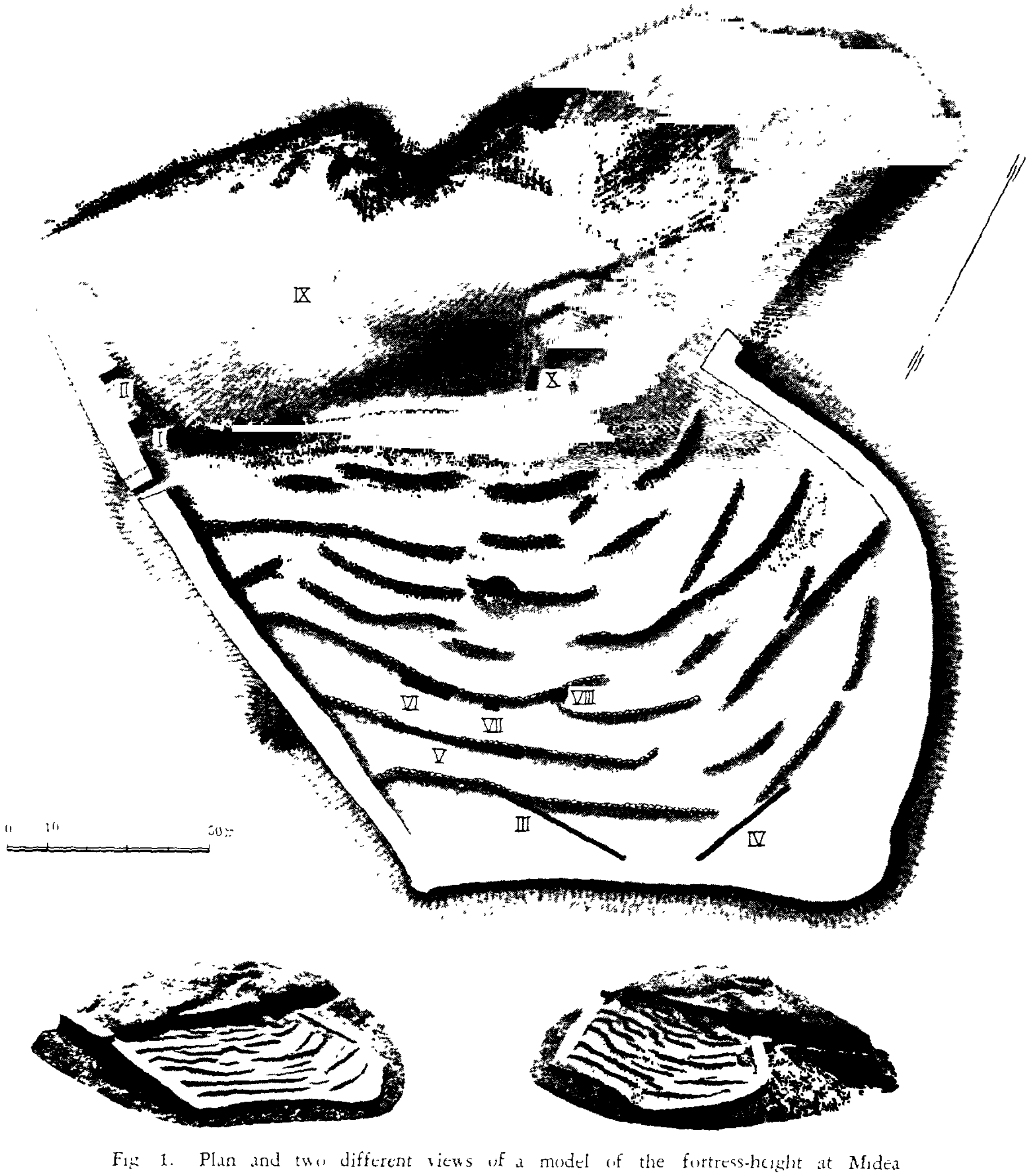


Fig. 1. Plan and two different views of a model of the fortress-height at Midea

Immediately inside the gate there is a wall transversal to the great outer wall; it probably formed part of a fortification that protected the gate. The transverse wall runs in the same direction as the gateway, flush with its southern side. South of this wall, at some metres'

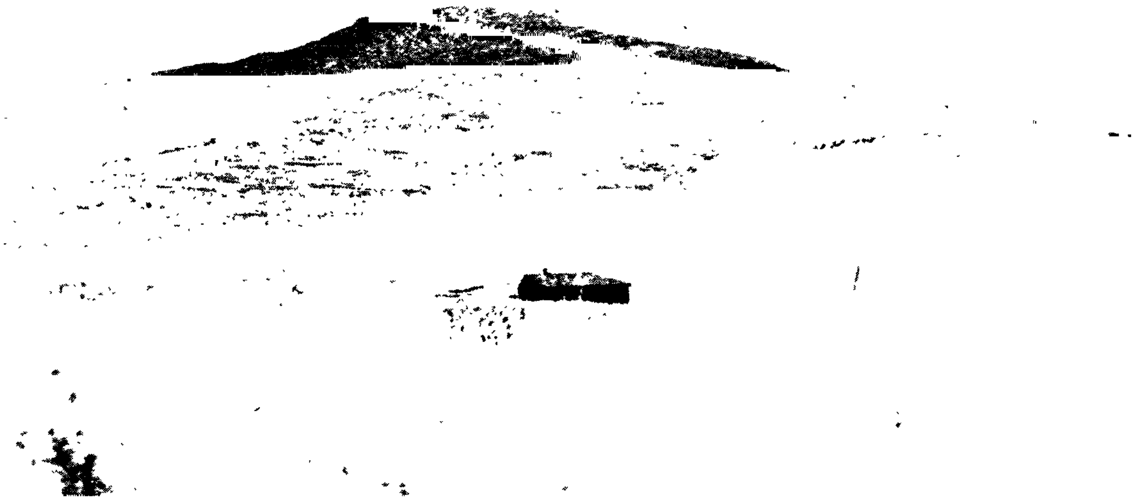


Fig. 2 The citadel of Midea from the north east.

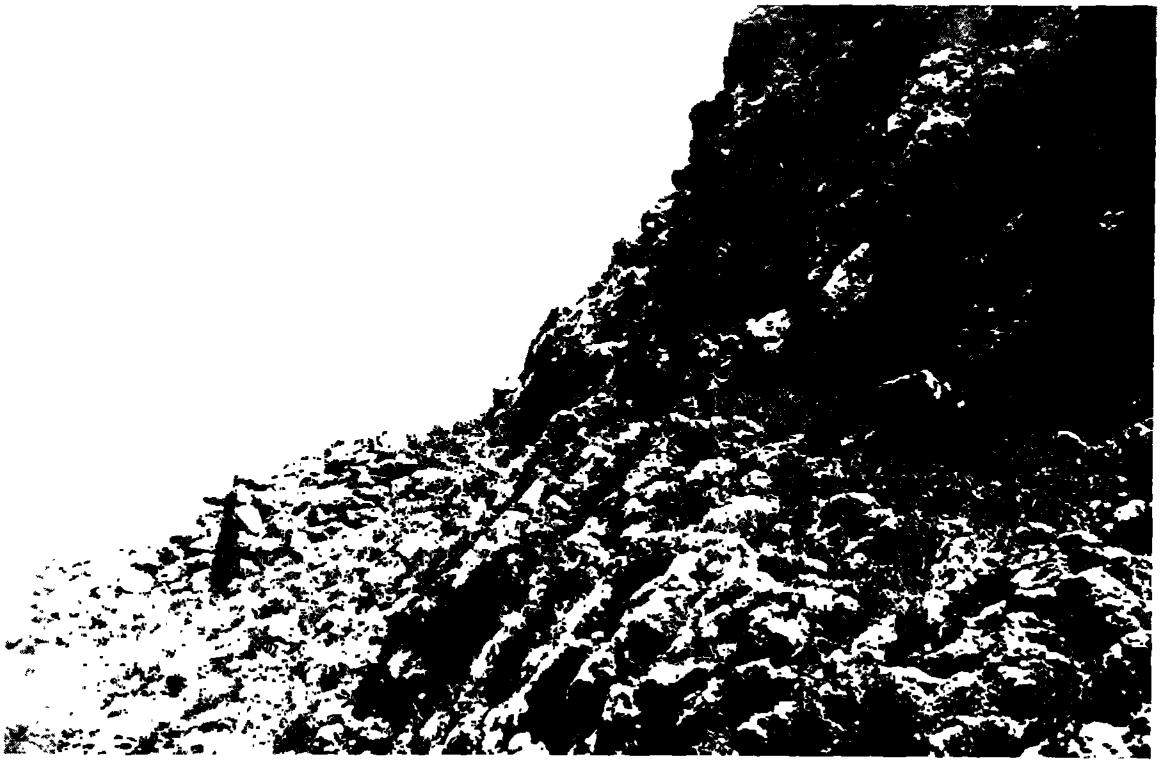


Fig 3 The western gate with tower projecting outward; outer ramp in the foreground

distance, there are remains of still another transverse wall, parallel with the first one. Extending at present from the citadel-rock, here very precipitous, it now does not quite reach to the inner side of the outer wall.

It is conceivable that this wall is a remnant of a gate tower, probably erected at a later date than the outer wall and unconnected with it — a tower which could not be placed outside the wall because of the configuration of the ground. The road leading up to the palace on the plateau summit of the citadel-rock probably ran immediately below this tower, before turning to the right. The rock is here so badly weathered that it is impossible to distinguish any worked surfaces.

About 7 m. northwest of the eastern gate we cleared a pit that the peasants said was a natural hollow; it became obvious, however, that it had been previously excavated. During this work a broad wall at right angles to the circuit wall came to light. On the adjoining lower terrace we came across the upper portion of rather badly preserved foundation walls of a house.

The northern course of the fortress wall, as well as its northern sector on the west, is partly covered by earth, partly fallen down, but can nevertheless be determined with a certain degree of accuracy. The southern portion of the western wall is somewhat better preserved, but the upper layers have generally fallen down forming a vast heap of stone along the outer face of the wall.

The western gate, which opens out in a southerly direction, is bounded on its northern side by a square tower, which projects outward beyond the face of the wall (Fig. 3). The western wall terminates with the tower, the gate being bounded on its other side by a vertical rock. This gateway was also blocked by fallen stones and earth, but here, too, the roadway leading out from the gate probably descended at a high angle.

An outer ramp about 3 m. broad hewn from the rock extends southwards from the gateway, being bounded on its western side by a precipice and on the east by the wall of the citadel-rock. This ramp, about 70 m. long, ends in a small rocky ledge sufficiently wide for a bastion though it is now badly weathered. From this ledge a very steep path descends to the plain at the foot of the citadel-rock. It follows a rocky ridge covered with stones and decomposed rocks, which continues in the same direction as the ramp down towards the river. A well and a chapel are at present situated at the place where this rocky ridge reaches the plain.

Below the edge of the ramp the ground descends at a relatively even gradient, and it is possible that the road ran here instead of on the ramp, in which case the latter must have served a purely defensive purpose.

The acropolis.

The upper part of the fortified area consists of the citadel-rock, from which the earth has to a large extent been washed away. It is bounded on the north by a long terrace, rather narrow, but covered by a relatively deep layer of earth. Walls of the Middle Helladic period were found on the westernmost part of the terrace. They adjoin the so-called "Sacrificial Terrace", of which more will be said later on[1]. The palace was probably situated in the very centre of this part of the acropolis, about 50 m. east of its highest point. The northern somewhat less elevated part of the acropolis is filled with modern cultivated terraces, generally rather rich in soil and provided with retaining-walls of irregular stones. The trial shafts III—VIII were sunk in the three lowermost terraces. In addition, we excavated down to the solid rock within a small area of the terrace east of the southern end of shaft IV. Here we found, among other things, an assortment of pottery: black and grey Minyan, Late Helladic II—III, and some Byzantine glazed ware, as well as several Mycenaean buttons of semi-conical shape.

The 'Palace' (Fig. 4).

Among the weathered, uneven rocks about 50 m. east of the summit of the acropolis a relatively even plateau exists (Fig. 5), covered by a thin layer of earth. This plateau had been formed by levelling the rocky hummocks and by filling the intermediary depressions with earth and stone packing. In outline it is L-shaped with the longer arm orientated north-south and the smaller in the south orientated east-west. In the middle of the eastern side of the long arm there is a square pocket in the rock, here called the 'Eisodos', containing the remnants of several walls. From this pocket a cleft, the 'Lane to the eisodos', runs in an easterly direction down to another wall-complex in a terracelike cleft in the rock. In the north-eastern section of the main wing of the plateau two more pockets occur in the rock.

The narrower, east-west section of the plateau (Fig. 4, I) is bounded by an almost vertical rock-edge on the west, and by another to the north. This part of the plateau consists for a width of about 5 m. of evenly hewn rock which reverts in the south to more weathered rocky ground, ending in a steep declivity. Towards the east the levelled rock slopes slightly downwards, and is bounded in the central part of the plateau by a rounded rocky ridge, which rises about ½ m. above the average level of the southern section of the plateau. In the northwest corner of the southern plateau a stone packing (Fig. 4, II), 30 to 70 cm. thick, was found, whose surface was actually higher than the levelled rock. In and around this stone packing fragments of prehistoric pottery ocurred from nearly all periods, dating from Early to Late Helladic inclusive, as well as late-classical "Rillenkeramik" and Byzantine glazed ware, the latter including an almost intact bowl with engraved spiral ornamentation under the yellowish-green glazing. In addition a coin from the late Roman Imperial Period was found here. Consequently, this stone packing is certainly to be ascribed to the Byzantine period.

The main part of the plateau, the so-called northern wing, is composed of an extensive area of levelled rock in its middle section, bounded on the west by a sharp-edged rock rising about 1 m. above the general level of the wing. On its other sides the levelled central area of the plateau is bounded by weathered rocks, which both in the east and north are be-

---

[1] The names in brackets given to the different places are taken over from the note book They give no real indication of proved use concerning the areas, being merely suggestions I have preferred to take them over in the publication in order not to cause unnecessary disorder in the finds, labelled after the note book

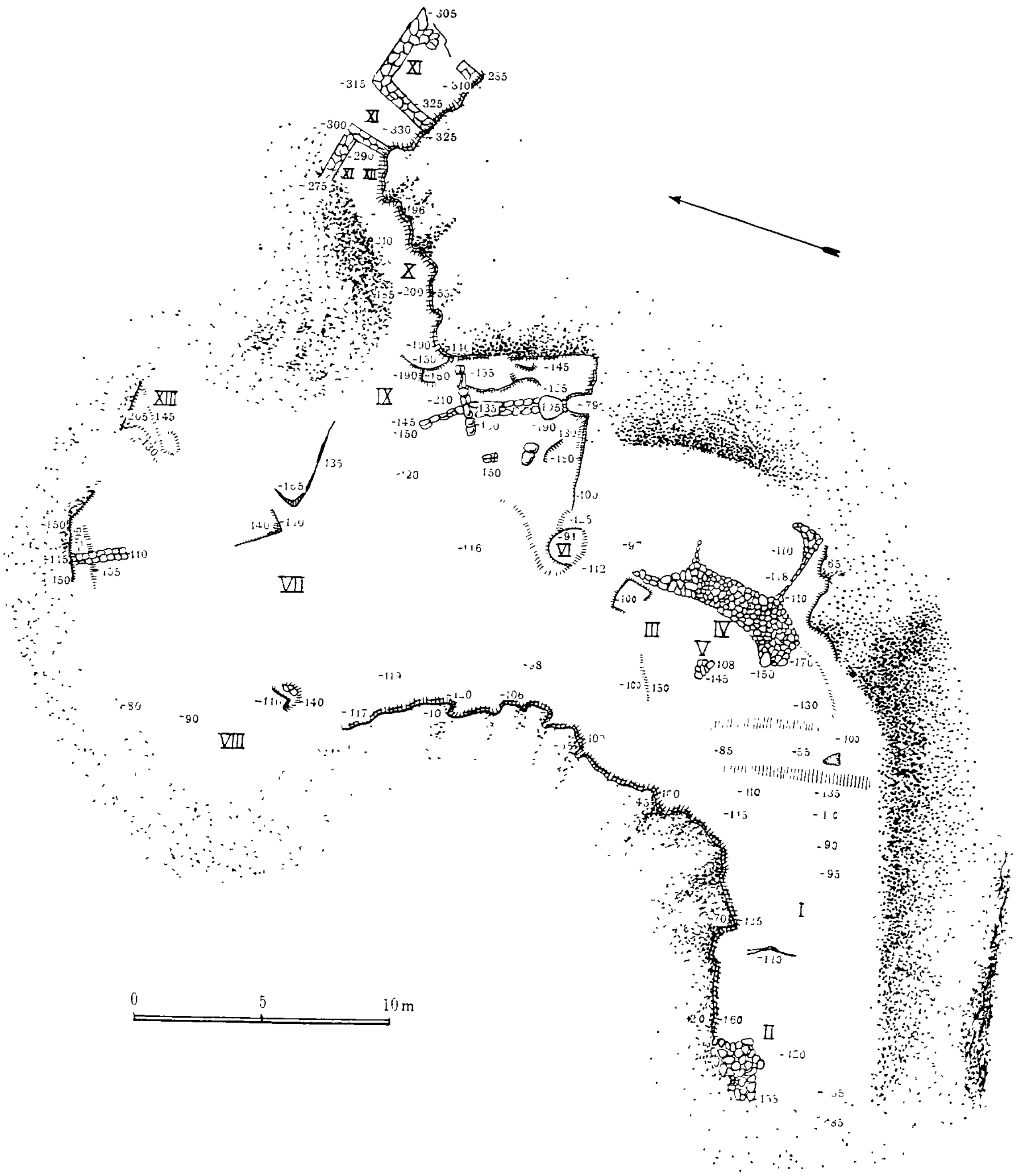


Fig. 4 Plan of the 'Palace'-area on the acropolis.

I	South west wing
II	Byzantine stone packing
III	Southern part of the north wing
IV	Stone packing
V	Roofing tiles under loose stones
VI	Indentations in the rock
VII	Northern part of the north wing
VIII	North west wing
IX.	'Eisodos'.
X.	Lane to the 'eisodos'
XI.	Beneath the 'eisodos'.
XII.	Location of 'chessman' and vases.
XIII	Location of tripod.

low its average level. Consequently, the plateau may have been originally widened in the east and in the north, perhaps by means of earth and stone filling. Only at the 'Eisodos' and in the north corner, where the existing remains of walls rest directly on the unevenly sloping rock, is it possible to determine that the built-on area extended beyond the levelled plateau.

The southern part of the northern wing (Fig. 4, III), which borders upon the southwest wing, lies on a somewhat lower level than the average for the levelled area. To a large extent the plateau was only covered by a thin layer of earth, but in the southeastern section, in addition to a number of pockets at other points, stone packing occurred on top of a layer of earth (Fig. 4, IV). No potsherds were found that could be dated with any certainty later than the Mycenaean age. Coarse ware was found mainly on the surface but under the edge of the stone packing in the southeast we discovered a finer Late Helladic ware, and, inter alia, an almost intact, small three-handled jug of L. H. III type, a pair of excellently preserved bronze tweezers, l. 8.5 cm., greatest br. of the arms 1.1 cm., and a long bronze needle with preserved eyehole, l. 16.5 cm., br. across the eyehole 0.3 cm. (Fig. 6, 1—2). Under some loose stones in the centre of the southern section of the northern wing (Fig. 4, V) lay many fragments of large roofing tiles. Where the stone packing ends, close by the middle of the levelled plateau, a number of small longitudinal indentations are visible in a squarish, slightly protruding part of the rock (Fig. 4, VI). The finds made here included half a mace-head of greenish stone, flattened at both ends, diam. 6.2 cm. (Fig. 7, 1), and fragments of late Mycenaean figurines. The pottery found dates

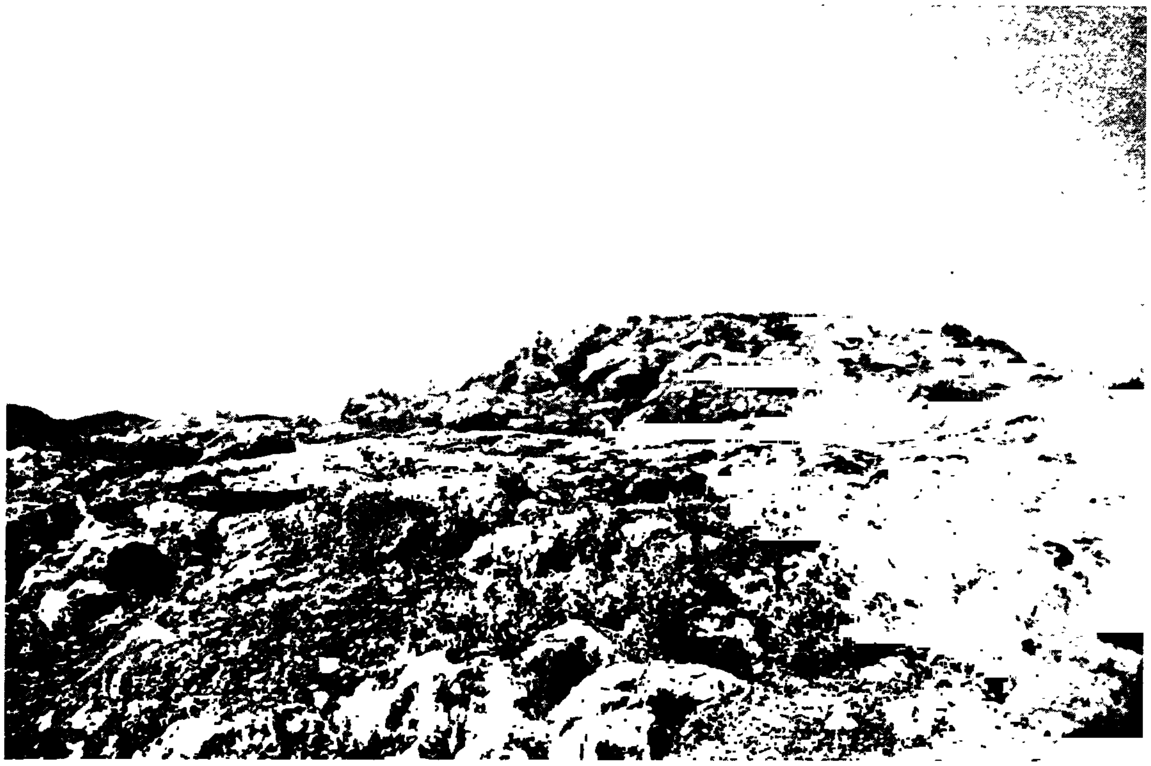


Fig. 5 Even plateau on the acropolis; the site of the so-called northern wing

from the beginning of the Middle Helladic period to the end of the Late Helladic. Black Minyan, grey Minyan and matt-painted potsherds occurred in association with Mycenaean fragments from different epochs, among others early Mycenaean, adorned with 'racket-designs', fragments of a large stirrup vase, rim fragments of an open bowl with figural ornamentation — a human head and possibly the head of a bird — together with several steatite buttons of the later type with concave sides.

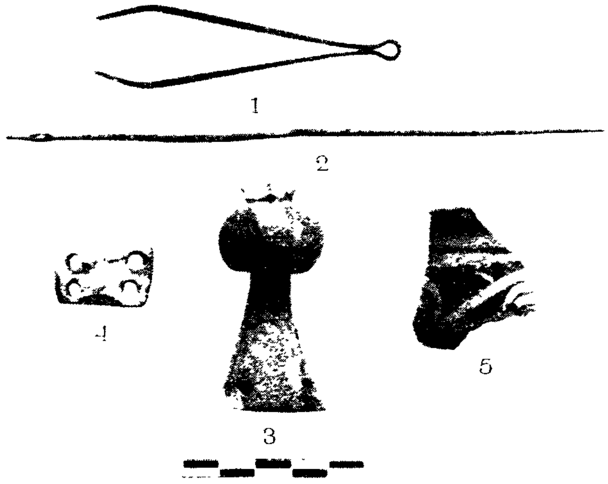


Fig. 6. Miscellaneous finds from the acropolis.

1) Bronze tweezers
2) Bronze needle
3) Chessman-like figure of ivory
4) Piece of a wild boars tusk, belonging to a helmet
5) Middle Minoan III sherd from shaft VI

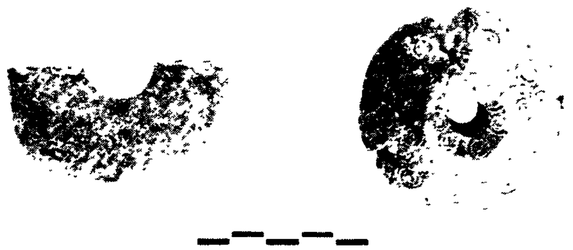


Fig. 7. 1) Fragment of mace head
2) Sword pommel

The north section of the northern wing (Fig. 4, VII) mainly consists of a levelled rock plateau. The pottery is chiefly of the same kind as that from the southern part, mainly Late Helladic ware, to which may be added a few fragmentary figurines, a couple of steatite buttons etc. But here some occasional potsherds of later date, 'Rillenkeramik' and glazed ware, were also to be found. In the northwest corner (Fig. 4, VIII) the northern wing curves outwards in a westerly direction, where obvious traces of levelling were revealed. Remains of a wall or of stone packing were noted in a cleft and throughout the whole area, especially towards the west, great quantities of pottery were found, Late Helladic II and III, including fragments of stirrup vases and stemmed goblets.

In the extreme northern corner of the north wing, outside the levelled rock area and at a lower level, two rocky defiles filled with earth were cleared. In the more easterly crevice (Fig. 4, XIII) a tripod was found of relatively soft, greyish, volcanic stone, probably Melian, of the kind used for hand mills, h. 13 cm., diam. 35 cm. (Fig. 8). Moreover, several conical stone buttons came to light together with an intact, unadorned, Mycenaean saucer and quantities of late Mycenaean pottery. In the other crevice the remains of a wall occurred, erected directly on the uneven rock. Here, too, we found a great quantity of Mycenaean potsherds.

The 'Eisodos' (Fig. 4, IX).

The middle section of the northern wing slopes down towards the east to a large defile, abundantly filled with earth. In this defile a number of walls occurred, erected at right angles to each other and resting directly on the uneven rock. It is possible that there was an entrance here to the building complex on the plateau. Here we found in association with Mycenaean pottery, inter alia, a large sword pommel of bluish green stone, in the shape of a flat cone, with an indentation on its upper surface around the hole for the tang, diam. 6.7 cm., h. 3.5 cm. along the hole (Fig. 7, 2). The dorsal surface of the pommel is richly decorated with small double concentric circles with their centres clearly marked. On one side between the circles there is a 'fir tree' figure but with upturned branches, in another place there are three chevrons, in a third four curved lines filling in a space. The pommel probably once had a sheathing of gold. Six conical Late Helladic III buttons of steatite were found nearby. The bronze handle of a vase, 9 cm. broad and 6 cm. high, a fragment of a bronze knife, 6 cm. long, a bronze nail, 6 cm. long, and a bronze mounting, probably for a square beam end, as well as quantities of lead, were also found here. Seven fragments of Mycenaean female figurines are to be noted among the pottery and a potsherd with a figural representation, probably of the hind legs of a horse. In addition, a stone mill with appurtenant small round grinding stones was also found.

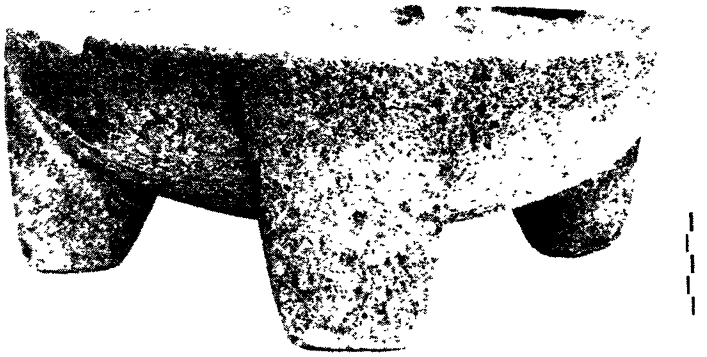


Fig. 8 Tripod of soft greyish stone

From the defile just mentioned another, small and irregular defile extends downwards in an easterly direction, called by us the 'Lane to the eisodos' (Fig. 4, X). It was filled with earth, but there were no vestiges of walls or of stone filling. The abundant pottery was Mycenaean throughout and included ten fragments of Mycenaean female figurines, of the type with semicircular body with up-turned crescent arms, as well as the type with round body. In addition, we found a bi-conical distaff spool of clay and a bronze nail, 7 cm. long, most closely resembling a spike.

This defile becomes wider in the east (Fig. 4, XI), forming a small terrace which extends southeastwards between the irregular, weathered rocks. On this terrace, which rests on uneven rocky ground, a complex of walls forming three rooms occurs, in which quantities of earth had accumulated. Here rich finds of pottery were made. Among the many objects found in the westernmost room (Fig. 4, XII) a chessman-like figure of ivory came to light with a flat head, a body in the shape of a flattened ball and an elegantly out-curved stem, 6.2 cm. high and 3.0 cm. broad at the base, slightly above which it is transversely perforated (Fig. 6, 3) [1]. An elliptical ivory plaque, preserved length 5.0 cm., may have been part of the inlay of a gaming table [1]. Here several Mycenaean steatite buttons with concave sides were also found. Two Middle Helladic fragments occurred among the ceramic material, a black Minyan and a grey Minyan, but most of it consisted of pieces of Mycenaean vases, among others an almost intact stirrup vase and a nearly intact, small open jug with vertical handle, in addition to fragments of stirrup vases, stemmed goblets, and so-called alabastra, as well as a conical earthenware button.

---

[1] Compare EVANS, *Palace of Minos*, IV, p. 521, Draughtboard and pieces, fig. 465

The 'Sacrificial Terrace'.

About 10 m. north of the summit of the citadel-rock is a small terrace, approached by one or possibly two ramps: the ramp from the northeast is relatively distinct, that from the southwest more uncertain. The natural unevenness of the terrace was levelled by means of big, irregular blocks of stone. The pottery consisted for the most part of Mycenaean wares, but a number of grey Minyan and matt-painted sherds were also present. Fragments of a female figurine and a button of steatite with concave side from the late Mycenaean period are among the finds made at this site.

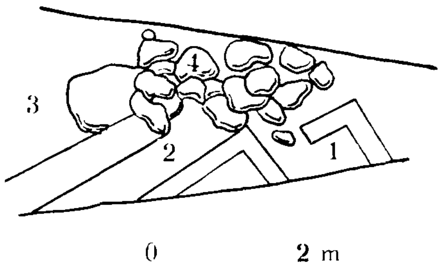


Fig 9 The 'Sacrificial Terrace'.

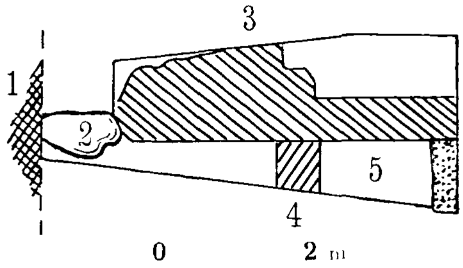


Fig 10. Shaft II

Close by the lower end of the northern ramp a trial trench (Fig. 1, X) was dug straight across the terrace immediately below the 'Sacrificial Terrace'. Here several walls came to light (Fig. 9). The pottery found is almost entirely Middle Helladic. In the part of the trial trench lying closest to the 'Sacrificial Terrace', area 1, with its almost wholly Mycenaean deposit we found mixed pottery, Middle Helladic and Late Helladic, as well as a few Byzantine sherds with greenish glaze. Among the Middle Helladic sherds black as well as grey Minyan occurred, together with black engraved ware and red slip, as well as matt-painted sherds. Both painted and unpainted sherds were found among the Mycenaean wares including fragments of stemmed goblets.

All the pottery in area 2, farther north, was of the Middle Helladic period; matt-painted was represented as well as black and grey Minyan.

The sherds from area 3 were also purely Middle Helladic. Among the grey Minyan ware we found large fragments of bowls with typical handles and poorly fired brown-slip ware with Minyanizing vessel shapes. Matt-painting is represented by numerous sherds including two large necks with shoulder pieces and a large fragment with brownish-black painting on yellow ground. A Hagia Marina sherd with light-yellow spiral pattern on dark-brown ground was found in association with these Middle Helladic sherds.

---

[1] As regards the occurrence of the originally Egyptian gaming table in Crete, as well as on the mainland, compare EVANS, *Palace of Minos*, especially I. p 470—486

The pottery from area 4 is similarly wholly comprised of Middle Helladic, black and grey Minyan, matt-painted and red-slip ware.

The shafts (Fig. 1).

Shaft I.

About 10 m. south of the eastern gate remains of a transverse wall are visible which probably commenced at the fortress wall and extended westwards up to the steep cliff and possibly belonged to an inner gate tower (cf. above p. 4 ff.). Fallen blocks from the fortress wall made investigation difficult at this site, but a trial pit was dug for the purpose of laying bare the southern face of the wall. Large fallen blocks made it impossible to draw any definitive conclusions, but a stone filling between the shaft and the gate could be cleared and this was probably the lowermost part of the gate tower. Under a number of fallen stones we found a large, undecorated pithos, in the bottom of which lay a large lead pig. Down to a depth of 1.20 m. below the original ground level the pottery was wholly Mycenaean.

Shaft II (Fig. 10).

Between the citadel-rock, which slopes towards the northeast, and the great fortress wall an earth-filled pocket occurs, in which trial shaft II was sunk. A relatively broad transverse wall (3) extended at right angles to, and was unconnected with, the fortress wall (1). This transverse wall diminuished in height as it approached the fortress wall and was possibly destroyed when the ground was excavated for the building of the latter wall. A big stone (2) had fallen down from the fortress wall. Abutting against this inner transverse wall another, though thinner wall occurs (4), parallel with the fortress wall. Between this and the cliff on the west (5) we established the existence of an ashy deposit, about 30 cm. thick, containing a quantity of potsherds. Down to a depth of 1.50 m. the pottery in this shaft is almost wholly Late Helladic III, below this level it is mixed with some Middle Helladic (black and grey Minyan, and matt-painted).

Shaft III (Fig. 11).

On the lowest and northernmost terrace, rich in soil, a shaft 1 m. broad was dug obliquely across the terrace in an east-west direction. Close to the great fortress wall (1) a stone filling was found (2) about 2 m. broad, the purpose of which was probably to form a terrace on the sloping rock inside the wall. The stone filling presumably rests on earth. In order to avoid the destruction of this complex — to be studied later in systematic excavation — it was left intact when the shaft was dug. Farther east the shaft crosses various walls and stone fillings (3, 5, 6, 7, 8), and only in two places (4, 8) could the shaft be dug down to the rock, which here lies at a depth of resp. 2.70 and 2.15 m. In the shafts some fragments of bronze and lead cramps were found, and also, at a depth of about 1 m. immediately inside the wall, a fragment of sandstone with three deep grooves, probably part of an arrow-sharpener. As regards the pottery the layers all the way down to the rock are mixed, consisting of Late Helladic and Middle Helladic, with the proportion of the latter element, however, obviously increasing towards the bottom. It is particularly interesting that here several fragments of 'overfired' vessels were found from the Mycenaean as well as the Middle Helladic period. A few painted Mycenaean sherds show figural representations, one, among others, is adorned with a human head, drawn in the typical Mycenaean style.

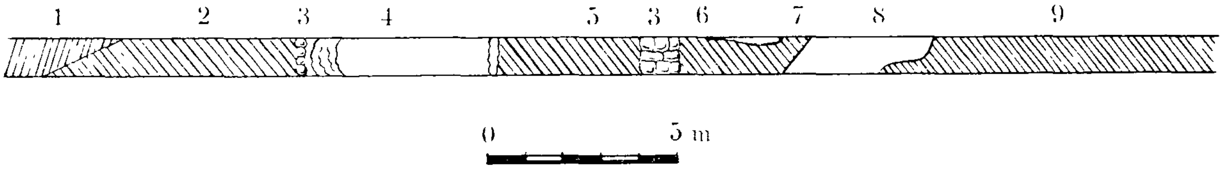


Fig 11 Shaft III

Shaft IV (Fig. 12).

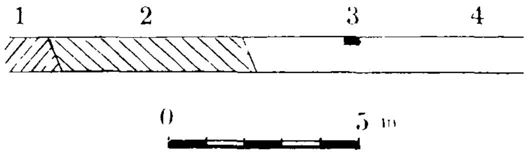


Fig 12 Shaft IV

From a point on the great wall (1), about 20 m. west of the starting point of shaft III, shaft IV was sunk. It was extended about 30 m. in length. Here, as in shaft III, a stone filling about 2 m. wide (2) was found inside the wall. Somewhat further in on the terrace we found the remains of a wall (3), but further in again the rock gradually appeared (4). In this shaft the pottery was mainly Mycenaean, intermingled, however, with grey Minyan. In the shaft a worked piece of a wild boar's tusk was found that had undoubtedly belonged to a helmet; it is perforated at all four corners; its length is 2.8 cm., its breadth 1.7 cm. (Fig. 6, 1).

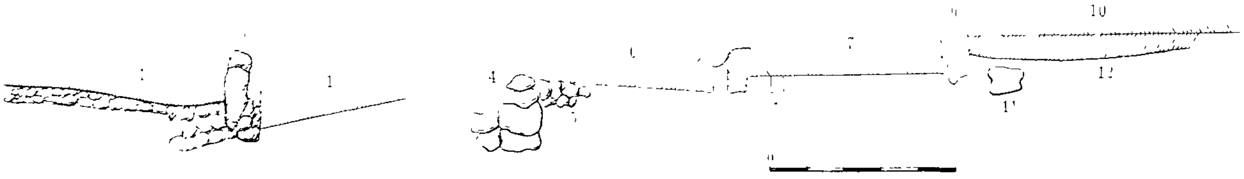
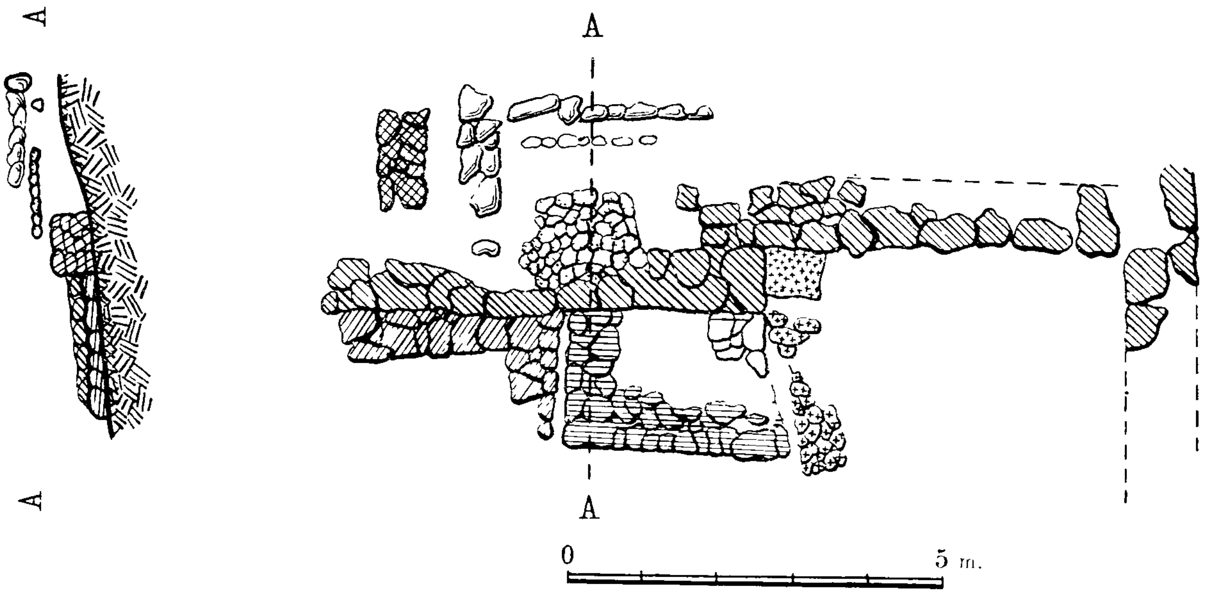


Fig 13 Shaft V

Shaft V (Fig. 13).

On the second terrace a row of walls on different levels (1, 3, 6, 7, 10, 12) with cross-walls (2, 4, 8, 9, 11) was uncovered immediately below an upper, modern terrace wall. Only a thin layer of earth covered them, so that here and there the upper courses were actually exposed. The pottery was for the most part Middle Helladic, mainly Middle Helladic III, grey Minyan and matt-painted, brownish violet on polished yellow ground and red-slip with Minyanizing forms. The thinly scattered Mycenaean sherds are Late Helladic III, most of them representing the 'Granary' style 'Overfired' sherds were also met with here. In the middle section of the shaft a small one-edged bronze knife was found, 8 cm. long, 1.7 cm. broad.



1 ▨ Wall of big stones

2 ▨ Wall on lower level than preceding but built against the latter

3 ▤ Wall built on the rock

4 ▦ Wall with more than one meter of earth beneath

5 ▭ As preceding but of different construction

6 ▭ Possibly fire-place in preceding house

7 ▭ Wall unrelated to 1

8 ▭ Wall on the rock

Fig 14 Shaft VI

Shaft VI (Fig. 14).

On the modern, cultivated terrace above shaft V walls were also discovered in shaft VI, immediately below the modern terrace wall which forms its upper limit. Here, too, the walls were covered only by a thin layer of earth. A complicated system of walling representing strata from various building periods, came to light; compare fig. 14. Over the whole area the pottery is chiefly Middle Helladic, mainly grey Minyan, though Late Helladic III occurs, especially in the upper strata. Here, too, a Cretan Middle Minoan III sherd with yellowish-white spirals on red glossy ground was found (Fig. 6, 5).

Shaft VII (Fig. 15).

On the same terrace as shaft VI, though somewhat farther west, a small shaft was sunk, shaft VII. Walls were also uncovered here close by the modern terrace wall, obviously forming the corner of a house. The pottery was here almost entirely Middle Helladic, with black and grey Minyan and matt-painted in addition to some occasional Late Helladic III sherds.

Shaft VIII (Fig. 16).

Still farther west on the same terrace an additional, small shaft was dug where house walls also came to light. Here, too, the pottery is mainly Middle Helladic with occasional Late Helladic III sherds.

In conclusion, the trial excavations have given the following result:

We have ascertained that the site of the Mycenaean palace was on the upper part of the citadel-rock, where rather extensive levelling and filling up of existing crevices make sufficient space for a relatively large establishment. It seems most probable, to judge from the levelled rock, that it had a plan similar to that of Arne-Gla in Boeotia [1], built in two wings meeting at right angles rather than to those seen at Tiryns and Mycenae. Access was provided by means of a road running down to the eastern gate, the main entrance to the castle through the great fortress-wall. To judge from the pottery found here, the establishment ought to be ascribed to the Mycenaean age.

The smaller trial pits show that during the Middle Helladic period extensive buildings existed in the area now enclosed by the great wall. Finds of Early Helladic sherds are comparatively rare. In the Late Helladic period the whole enclosed area was undoubtedly built on. At many points walls of earlier periods seem in part to have become incorporated into later buildings.

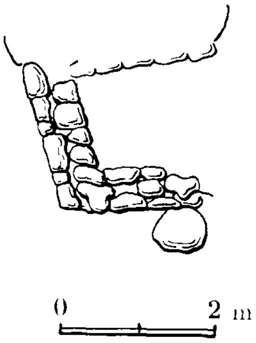


Fig 15 Shaft VII

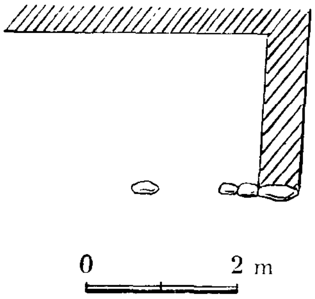


Fig 16. Shaft VIII

The lower terraces, where the layers of earth are about 3 m. deep, invite a thorough excavation, especially since one does not have to reckon here with any settlement later than the Mycenaean. In other excavation areas, as for instance in Mycenae and Tiryns and also, to a certain extent, in Asine, later building has in some measure made it impossible to distinguish clearly the housetypes of prehistoric periods from those of a later date.

A thorough clearing of the inner side of the great fortress-wall in the north and west would probably also shed light on the technique of fortification in prehistoric, especially Mycenaean, times.

Taken as a whole the settlement recalls that at Mycenae with the palace on the hilltop and the agglomeration of the private houses inside the fortress-wall on sloping terraces. Affected by different natural conditions the stronghold at Tiryns represents another type of Mycenaean settlement.

---

[1] Cf *Ath Mitt* 1894, p 405 ff , NOACK, *Homerische Paläste*, p 19.

II. The Necropolis.

THE necropolis in which our investigations of tombs were undertaken is situated about 1 km. west of the Midea acropolis, just beyond the village of Dendra. The tombs are located on very gently sloping ground, and one would hardly have thought of searching for chamber tombs in this place if the discovery of the bee-hive tomb in 1926 had not given rise to a closer examination of the surrounding area (Figs. 17, 18, 19).

In 1927 I had the opportunity of investigating three chamber tombs, published in *The Royal Tombs*, and in the autumn of the same year the then ephor in Argolis, N. BERTOS, excavated two more, which, however, have remained unpublished. All these tombs, 1—5, are situated below the road leading from Dendra to the village of Manesi, and above a small trackway which leads through the fields down to the plain in a northwesterly direction. Tomb No. 6, investigated in 1937, is situated below this trackway, and the tombs, 7—11, excavated in 1939, were discovered in close proximity to it. A great number of trial trenches were dug in various places on the rocky slope, and below tomb 11 the dromoi of so far uninvestigated tombs were intersected.

In the soft, friable rock harder concretions are interspersed, occasionally in the shape of small balls of limestone. In nearly all of the chambers the structure has more or less caved in, and in four of them, Nos. 3, 5, 10 and 11, the chamber roof had collapsed, so that the chambers were completely filled with earth. Unfortunately, we acquired telling evidence of how brittle the rock really is in excavating tomb No. 10, where further caving-in occurred during the course of the work, causing a fatal accident.

As regards the orientation of the chambers, it is adapted in each individual case to the natural fall of the rock, and there is no evidence to believe that other considerations have determined orientation. The rock apparently becomes harder towards the north, where the cutting out of a dromos was once started, but no chamber was hewn because of the obdurate character of the rocky ground. To judge from those chamber tombs which have so far been excavated, we have to reckon with a rock formation suited to rock-cut tombs in a stretch of ground extending in a north-northeast direction, and from the plan alone it is possible to determine the location of other tombs which have not yet actually been uncovered.

At various places during trial operations southeast of the tombs so far excavated, we found remains of constructions from the Early Helladic period, of an apparently quite ex-

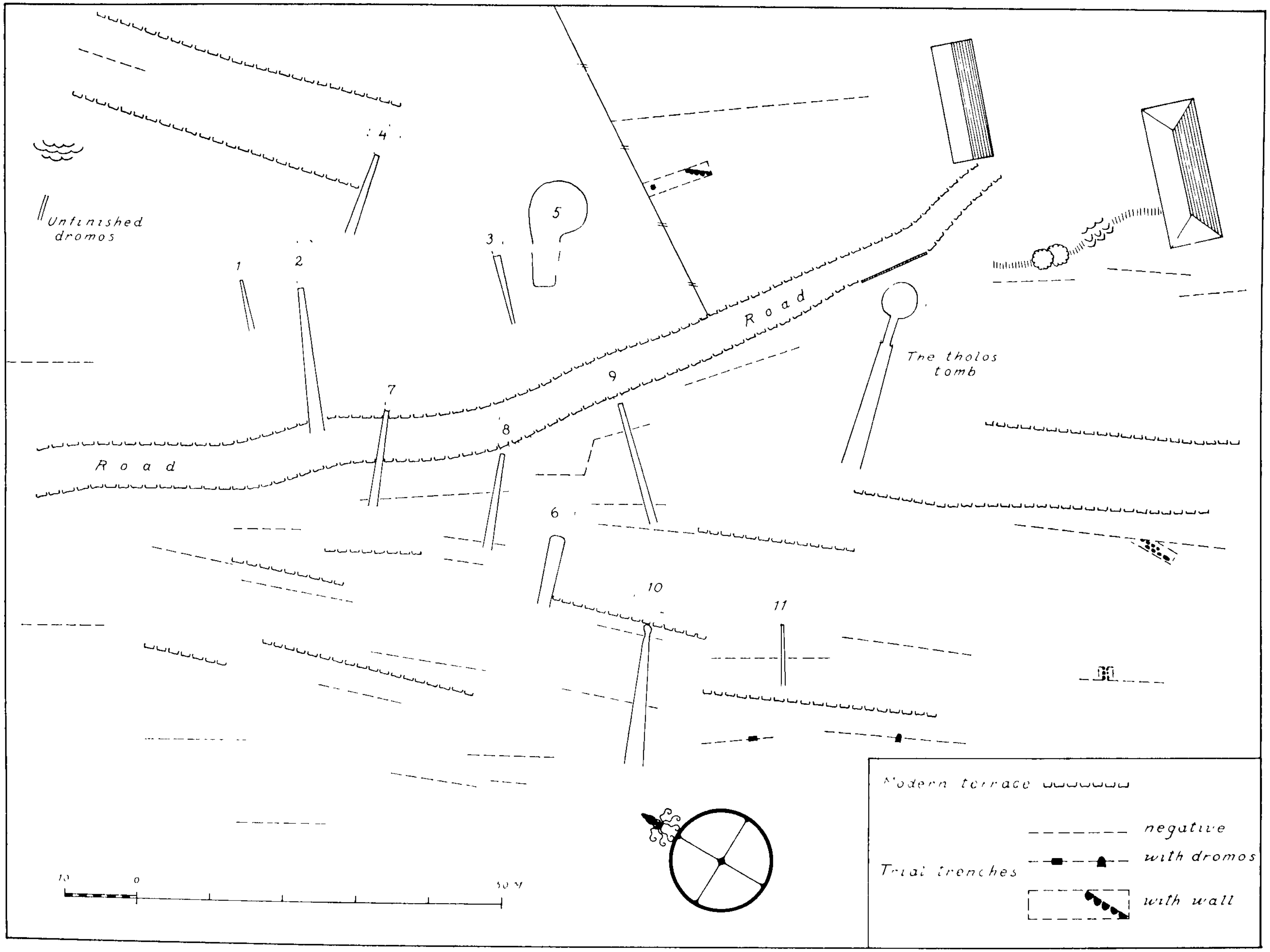


Fig. 17 Plan of the necropolis at Dendra.

Fig 18. The Mycenaean necropolis seen from the south west

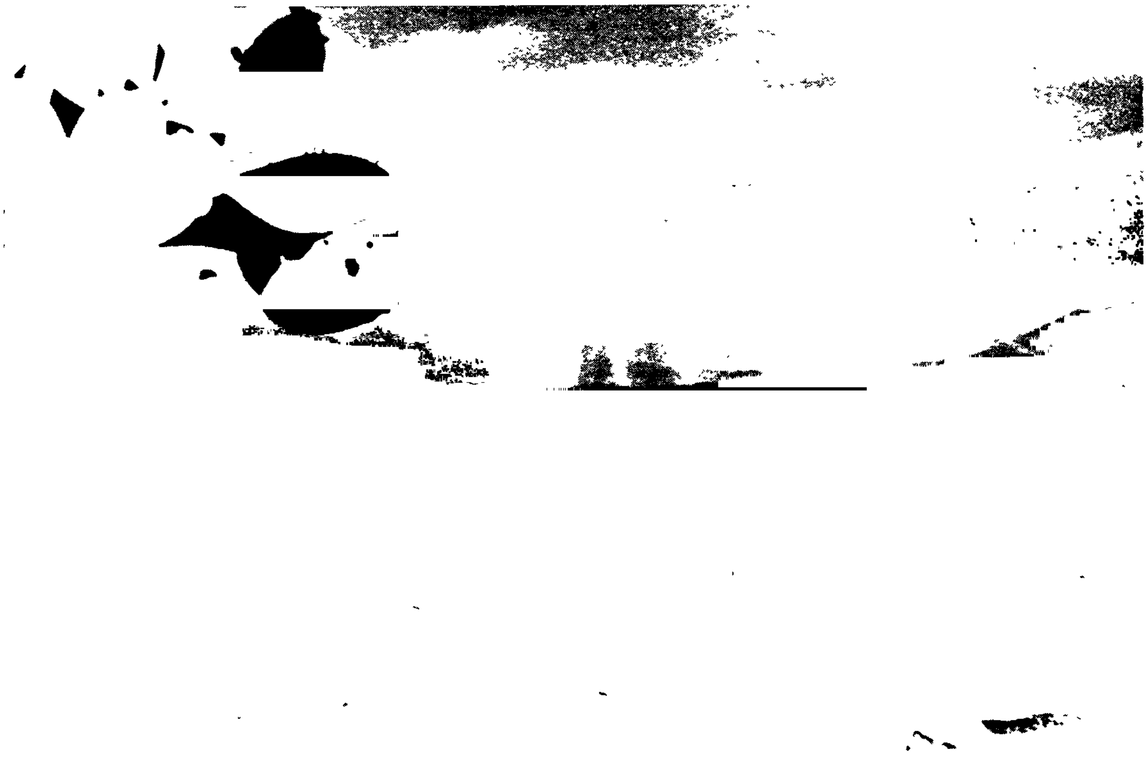


Fig 19 The Mycenaean necropolis seen from the north east

tensive nature. The foundation walls are concealed only by a layer of earth some decimeters thick, and here it would be possible to lay bare at a low cost relatively well preserved Early Helladic house foundations. This discovery of Early Helladic constructions explains the finds of pottery from this period that we made in the filling of several dromoi and in the earth in the chambers that have caved in. A number of Early Helladic sherds were also found in the bee-hive tomb[1].

Since only comparatively few Early Helladic remains have been discovered on the acropolis of Midea, it seems probable that building was concentrated during this period mainly on this part of the slope adjoining the plain. The immigrants who came at the beginning of the Middle Helladic period did not care to occupy the existing settlement, but settled on the hilltop instead.

Chamber Tomb No. 6.

In the summer of 1937 Greek archeologists were intensely interested in the so-called Dendra mystery, about which details could be gathered from Greek legal acts. A peasant in Dendra, it was asserted, had found a large lechane of purest gold, which, however, had disappeared in some mysterious manner. When we Swedes were engaged in excavation at Berbati, I considered, after having consulted the competent authorities in Athens, that the occasion was favourable for an attempt to throw light on the matter by staying some time at Dendra in order to excavate a little more on the spot where, according to the villagers, the large gold vessel had been found. It may be mentioned incidentally that these investigations gave a negative result, and anyhow the trial excavation on the indicated spot, some hundred metres south of the present cemetery, proved that such a find could never have been made there. Here, according to the old villagers, there was once a village called Sanga, and my trial excavation revealed vestiges of a late settlement, mainly Byzantine though some coarse Hellenistic potsherds also came to light.

While in Dendra I seized the opportunity of undertaking an excavation in the Mycenaean necropolis, the existence of which was revealed in 1927. In digging trial trenches I immediately found that a number of chamber tombs existed here. We decided to investigate one of them, situated almost 50 m. west-north-west of the bee-hive tomb (Fig. 20).

It soon became evident that this tomb had an unusually broad, but short dromos (Fig. 21). At its outer end its width is 1.43 m., at the door 2.10 m.; its length is 9.60 m. It slopes steeply downwards and is 3.80 m. deep at the stomion. The walls of the dromos are only very slightly inclined inwards; nearest the stomion, the dromos has the appearance of a vertical shaft. At the lower end of the dromos, 3.15 m. from the stomion, there are two steps, hewn out of the rock; the lower one is hewn in such a manner that the dromos is deepened only over a width equal to that of the doorway and benches have thus been formed at both sides. At the inner end of the dromos in front of the stomion remains of a blocking wall still existed extending over the whole width of the dromos; it was preserved to a height of about 0.55 m. (Fig. 22).

---

[1] Cf. *Royal Tombs*, pp 27, 31.

The doorway is about 1.00 m. deep, 1.00 to 1.15 m. wide and 1.80 m. high. The stomion was closed by means of stones, but it was evident that, as regards the upper part, the filling material was not the original one (Fig. 22). Here it consisted of a pell-mell accumulation of stones with earth between them; obviously the filling had been thrown down from above. The stone packing that had originally been placed in the upper part of the stomion was later found in the chamber; it had been thrown in when grave-robbers at an early date broke into the tomb. The original stone packing remained to a height of about 1.20 m. (Fig. 23). In the floor of the stomion there are two grooves, 0.20 to 0.25 m. deep, extending about 1.50 m. into the dromos and 1.65 m. into the chamber (Fig. 24).

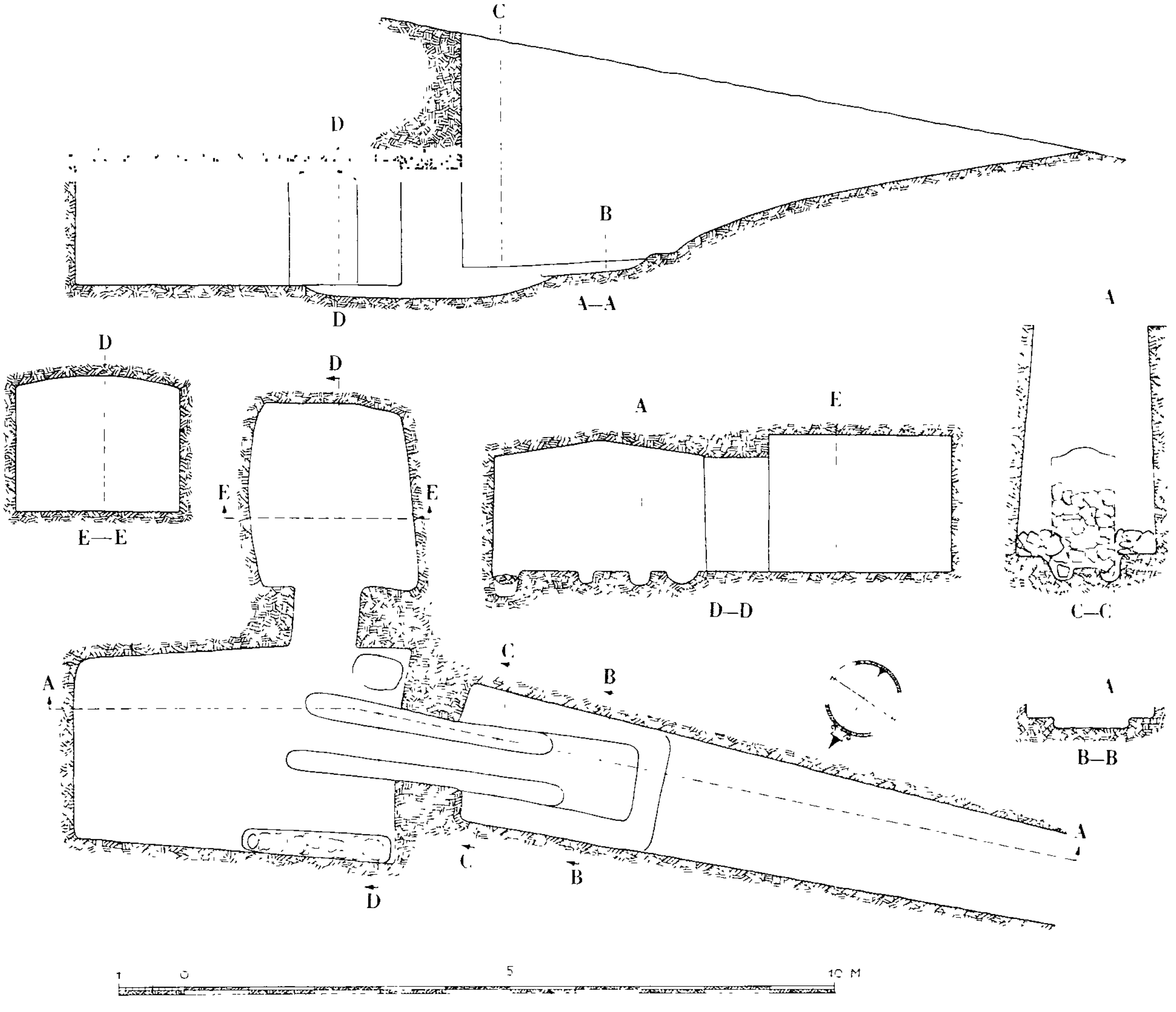


Fig 20 Plan and sections of chamber tomb No 6.

Fig 21 Chamber tomb No. 6; the dromos.

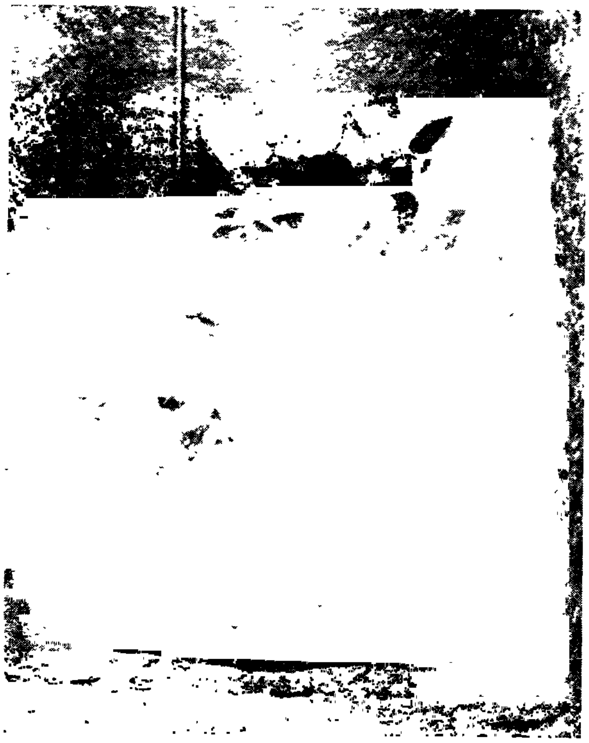


Fig 22 The inner end of the dromos with steps, blocking wall, and walling of the door.

Fig 23 Original stone packing in the door; channels extending into the dromos.

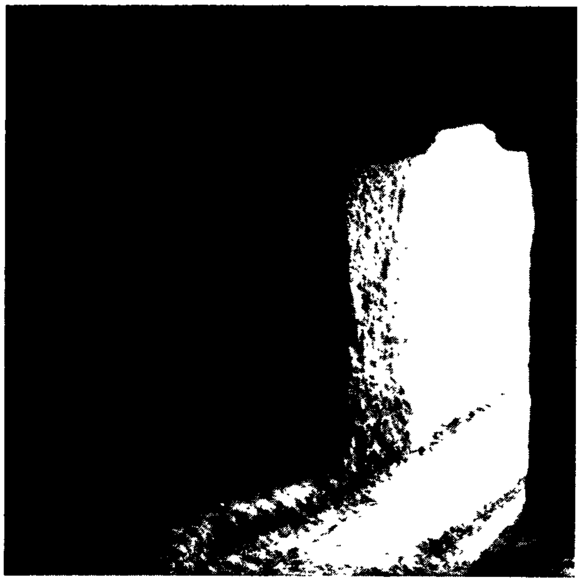


Fig 24. Door of chamber from the inside with channels extending into the chamber.

On entering the chamber we received a great surprise. In the long wall to the right of the entrance another doorway opened (Fig. 25), about 1.75 m. hight and 1.00 m. wide, that had once possessed a regular door filling such as we found in the outer doorway. But the stone packing was intact only to a height of about 0.70 m., the upper part of it having been thrown down by the grave-robbers. Both chambers were exceptionally well preserved; only in the outer a small section of the roof nearest the door had caved in. The roof of the outer chamber is hewn in the shape of a regular 'saddle' roof; that of the inner chamber is slightly vaulted. The ground-plan of the outer chamber is rectangular, narrowing somewhat inwards. It has the following dimensions: length about 5 m., breadth at the door 3.30 m., at the inner short wall 2.75 m., height at the side 1.75 m., under the ridge of the roof 2.00 m. The inner chamber is squarer in shape; its dimensions are: length 2.80 m., breadth 2.50 m., height in the middle 2.15 m.

In the walls of the outer chamber there were a number of mysterious borings about 15 cm. deep, 10 cm. broad, and 4 cm. high. They were at a distance of about 1.50 m. from the floor. If we had observed any traces of fire near them, I would have supposed that they had served to hold lamps, but it is also possible that they supported ornaments of some kind. Moreover, great care has been bestowed in making the walls of the chamber smooth and even; when the chamber was hollowed out, balls of limestone embedded in the rock had evidently been dislodged, but the cavities were filled up with clay mortar, which still exists in several places. Both chambers were hewn in exactly the same manner, and to judge from all appearances the cutting of the side chamber was contemporaneous with that of the outer chamber.

To scrape the chamber floors was a comparatively easy task, since they were covered only by a thin layer of disintegrated rock, charcoal and ash — generally only a few centimeters thick. Charcoal and ash deposits were particularly abundant in front of the stomion, extending 1—2 m. into the chamber and also at the back in the right-hand corner of the outer chamber.

Sherds of broken vases, some glass beads, an arrow-head of bronze, etc. occurred in the bottom layer, but very few skeletal remains. On the other hand, in two shafts in the floor of the outer chamber there was an abundance of such skeletal material.

Just to the right of the entrance a shallow shaft was discovered measuring 0,75 m. by about 0.55 m. and almost 0.20 m. in depth (Fig. 25). Remains of a greenish alabastron were found here among the in-swept bones. Along the main wall to the left of the entrance another shaft occurred, 2.30 m. long, 0.40 m. wide, 0.40 m. deep. It was definitely intact and we acquired much interesting knowledge during its careful excavation. It was covered by two flat slabs of the soft stone out of which the chamber is hewn and these lay in a position level with the chamber floor. Following their removal we came across a row of cover-stones with smaller stones filling in the joints (Fig. 26). They were so well joined that a hollow space still existed below them. It contained a compact heap of bones, about 0.25 m. deep. A cranium, comparatively well preserved, lay in the middle of the shaft and close by it thigh- and pelvis-bones were found; a mandible was found in a corner together with metatarsal-bones. We could trace the remains of at least three skeletons in this shaft. Potsherds occurred among the bone fragments together with stone and glass beads, pieces of wild boars' tusks, a seal stone, an arrow-head of bronze, etc. — everything, apparently, having been swept down into the shaft with the bones.

Only a few vase fragments and a small piece of a cranium were found in the side chamber.

Finds.

A closer survey of the finds in this tomb shows that the grave-robbers executed their job with great thoroughness, though we have every reason to be grateful to them for having overlooked the long shaft containing the bones and for having neglected the pilfering of the pottery within the tomb. True enough, we have not obtained any complete vessel, but those vase fragments which have been left to us are entirely adequate for the accurate dating of the tomb.

In the dromos.

1) 3 fragments of an alabaster vase (Fig. 27) of banded Egyptian alabaster. The complete base and fragments of the body of the vase are preserved: greatest continuous h. 14 cm., d. of base 5.5 cm., greatest preserved d. 15 cm. — A piece of the same vase was found in the innermost part of the chamber facing the stomion.

Its form is most closely related to that of Egyptian stone vessels from the time of the Middle Kingdom, f. inst. those published in VON BISSING's *Steingefässe* under Nos. 18304, 18501—18503 [1].

2) Scoop-lamp (Fig. 28: 1) with rounded base. H. 5.0 cm., d. 11.2, inclusive of the handle 19.5 cm. The handle is bent downwards and has a large terminal vertical perforation. Coarse brick-red ware; unpainted.

Such vessels, usually called ladles or scoops, are often found in the dromoi. WACE [2] has made the suggestion that those lacking the slight groove or hollow which served as a pouring-lip on the side opposite the leg-handle, were used for carrying charcoal during the fumigation of the tombs. I have dealt with this type of vessel and with WACE's hypothesis below p. 103. This type has hitherto been dated to Late Helladic II—III as successor of the more elaborate Late Helladic I type [3].

3) From the dromos fill a great number of Late Helladic sherds was also retrieved, among which may especially be mentioned some Palace Style fragments, including the handle of a large Palace Style vase, some sherds of a similar though smaller vessel with octopus decoration (Fig. 29: 8) and a number of sherds from a cup of Vapheio type with spiral decoration and painted rim (Fig. 29: 9) [4].

---

[1] Cf *Catalogue Général des Antiquités Égyptiennes du Musée du Caire*, 13

[2] Cf WACE, *Chamber Tombs at Mycenae*, p 164.

[3] Cf WACE, *ib* , BLEGEN, *Zygouries*, p 159 ff.

[4] Cf BLEGEN, *Prosymna*, fig. 663.

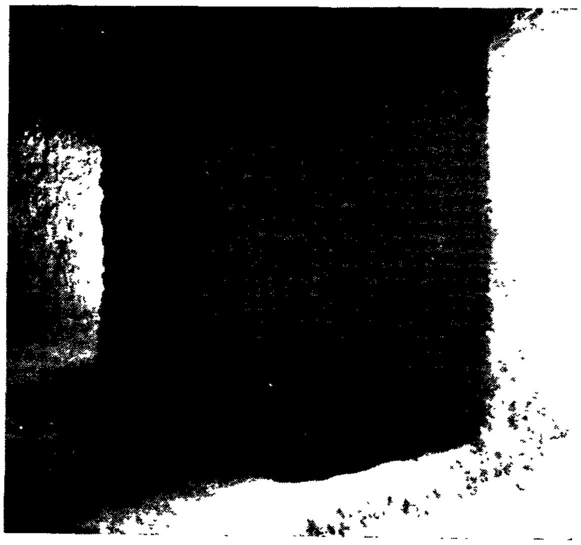


Fig. 25. Chamber tomb No. 6 seen from the inside; to the right the Stomion to the left the side chamber.

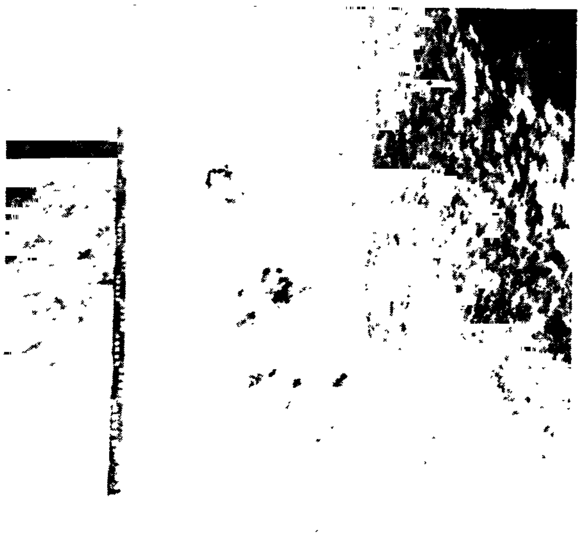


Fig 26 The long shaft in chamber tomb No. 6.

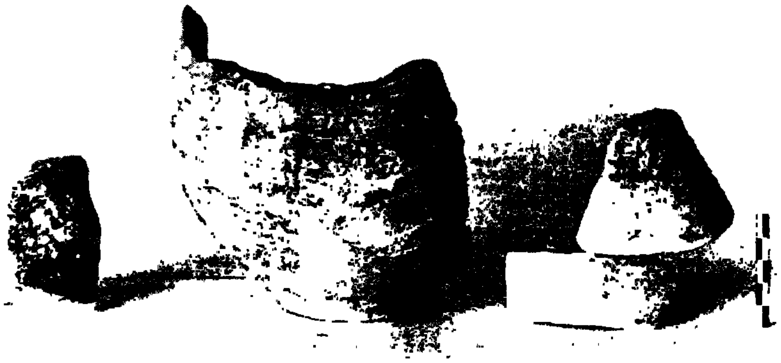


Fig. 27. Fragments of an alabaster vase (Finds No. 1).

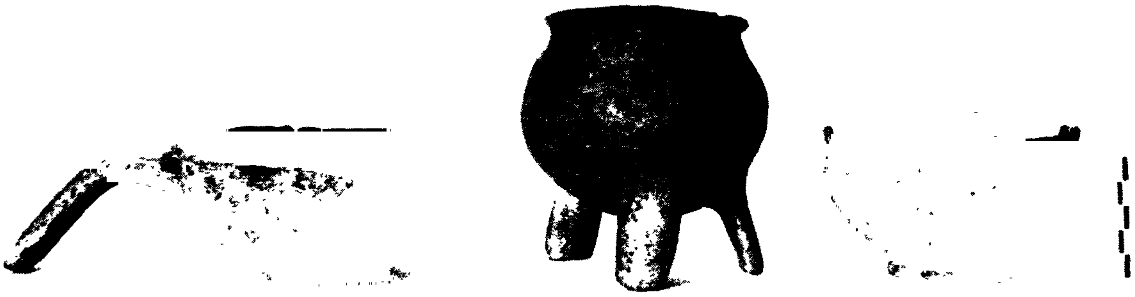


Fig. 28. Vases from chamber tomb No. 6.

1) Scoop lamp (Finds No. 2).
2) Brazier (No. 12).
3) Scoop lamp (No. 17).

From the chamber.

The small shaft to the right of the entrance.

4) Fragment of alabastron. Greenish-yellow ware with black varnish.

The long shaft on the left.

5) Fragment of cup with curved side and flaring rim (Fig. 29: 1). 'Tea-cup' shape. Spiral decoration with white dotted lines on part of the black lines as well as on the black-painted rim; continuous white lines on the black circles close to the foot. Painted inside. Fine, reddish-yellow ware; outside black, inside reddish-brown varnish.

For the shape cf. WACE, *Chamber Tombs*, p. 148, BLEGEN, *Prosymna*, p. 393, 396 f.; for the decoration WACE, *ib.*, p. 153, Pl. XLI, 37.

6) Fragment of similar 'Tea-cup' with spiral decoration (Fig. 29: 2). White dot and line decoration as on previous example, but in addition with lilac spiral-eyes. Unpainted inside. Ware as in No. 5; varnish black-brown, easy-flowing.

7) Fragment of 'Tea-cup'. (Fig. 29: 3). Double axes with curving blades and with pairs of wavy lines above and below in place of hafts. The axes are in panels separated by vertical rows of dots, ending above a V-shaped plant with drooping leaves. The rim painted inside and outside; near the base at least one broad, painted zone. Ware as in No. 5; varnish black to reddish-brown.

For the pattern, which occurs in exactly the same manner on two vases from the First Shaft Grave at Mycenae, cf. EVANS, *Palace of Minos*, IV, p. 292; WACE, *Chamber Tombs*, p. 152 f; BLEGEN, *Prosymna*, Figs. 655, 661.

8) Fragment of similar cup with stipple ornament (ostrich egg decoration) (Fig. 29: 4). Rim painted as in No. 7. Ware as in No. 7; brownish varnish on rim, the remaining surface stippled in good reddish-brown glaze.

WACE, *Chamber Tombs*, p. 160, refers this pattern, although hesitantly, to Late Helladic II, but the context in which it occurs here permits us to refer it with certainty to Late Helladic I; cf. also BLEGEN, *Prosymna*, p. 405, Fig. 669.

9) Fragment of alabastron. The flat base is ornamented with a 'wheel' pattern, with six pairs of whirling 'spokes'; at the border two concentric circles. On the side a wavy pattern, or 'switch-back', with one mass of rock rising to a rounded peak in each space between the handles. The pattern is bordered by a row of dots, and a line of dots also runs around the base of the neck. Neck and handle are completely painted. Ware as in No. 8; varnish black-brownish.

For the occurrence of the vase type and of the decoration during Late Helladic I cf. BLEGEN, *Prosymna*, p. 403 ff., Fig. 668, and also 106, 115.

10) Fragment of small askos (Fig. 29: 5). Foot and mouth preserved. On the sides decoration of lines and dots, at the base an encircling band. The mouth completely painted inside and outside. Soft, yellowish, finely cleared clay; reddish-brown varnish.

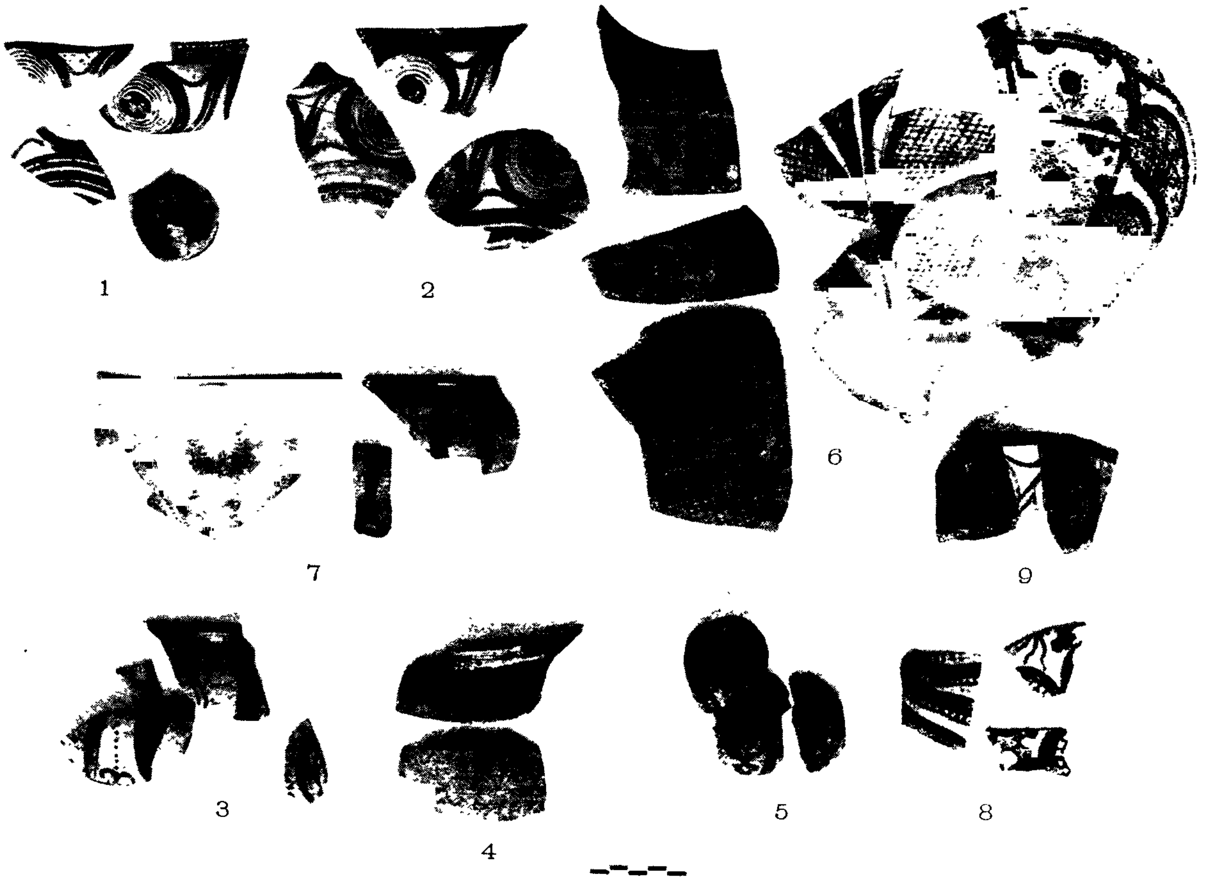


Fig 29. Fragments of vases from chamber tomb No. 6

1) 'Tea-cup' with spirals (Finds No. 5).
2) 'Tea-cup-' with spirals (No 6).
3) 'Tea-cup' with double axes (No 7)
4) 'Tea-cup' with ostrich egg decoration (No 8)
5) Askos (No 10).
6) Hole-mouthed jar (No. 13).
7) 'Tea-cup' with double axes (No 15).
8) Palace Style vase with octopus decoration (No 3).
9) Cup of Vapheio type with spirals (No 3)

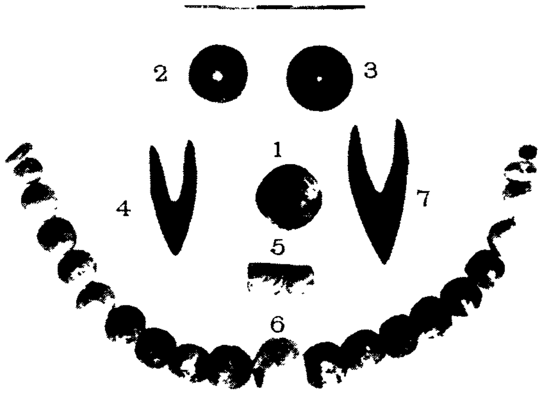


Fig. 30. Miscellaneous finds from chamber tomb No. 6.

1) Sealstone (Finds No. 18).
2) Amethyst bead (No 19).
3) Clay button (No 20).
4) Bronze arrow plate (No 21).
5) Longitudinal glass bead (No. 22)
6) Glass beads (No. 23).
7) Bronze arrow plate (No. 24).

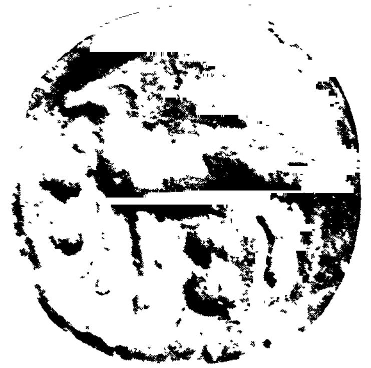


Fig 31 Cast of sealstone (No 18)

The occurrence of this type during Late Helladic I has not previously been proved, but it is met with in Middle Helladic, e.g. in the Sixth Shaft Grave at Mycenae, cf. KARO, *Schachtgräber*, p. 163, no. 944, Pl. CLXXIII, as well as later in Late Helladic II; cf. WACE, *Chamber Tombs*, p. 158 f.

11) Fragment of stemmed goblet with low foot and curved profile (one fragment in the side chamber.) Fine, reddish-yellow clay. Undecorated.

For the occurrence of this shape during Late Helladic I cf. WACE, *Chamber Tombs*, p. 148 f.; BLEGEN, *Prosymna*, p. 406 f.

12) Brazier, partly reconstructed (Fig. 28: 2), handle and lid missing. H. 10.2 cm., d. 10.0, at mouth 8.5 cm. Globular shape, flaring rim. Three slightly flattened legs. Three rows of perforations round the body. Coarse brick-red clay; undecorated.

This shape with three legs is dated to Late Helladic III, cf. WACE, *Chamber Tombs*, p. 184; BLEGEN, *Prosymna*, p. 455, but similarly perforated vessels on a foot — a type which is also met with during Late Helladic III, cf. e.g. *B.M. Cat. Vases*, I, 1 p. 141, A 809 from Ialysos — already appear during Middle Helladic, cf. *Asine*, p. 263, fig. 184: 1.

From the chamber floor.

13) Fragments of hole-mouthed jar (three fragments from the side chamber) (Fig. 29: 6). Plastic rim to accommodate a lid. Towards the base concentric circles, from which stalks drawn with double lines and with pear-shaped leaves arranged in pairs shoot up covering the whole body of the vase. The leaves are cross hatched — so-called 'racquet' pattern. The spaces between the plants are adorned with a kind of checquered pattern with double contour lines, which is intersected on either side by the cross-hatched leaves. On the inner check lines small, freehand semicircles;.in the centre of each squarish panel a disk surrounded by a dotted circular line. Fine, reddish-yellow clay; lustrous red varnish. — For reconstruction of our vase cf. WACE, *Chamber Tombs*, Pl. XXXIX, 4; BLEGEN, *Prosymna*, Fig. 656.

For the occurrence on the mainland of this vase type, which originated in Crete cf. WACE, *Chamber Tombs*, p. 149; BLEGEN, *Prosymna*, p. 393. The pattern with the cross-hatched leaves certainly comes, together with the shape, from Crete, where it remained in vogue from the polychrome Middle Minoan II vases down to the Late Minoan I, cf. EVANS, *Palace of Minos*, IV, p. 136 f. WACE, *ib.*, p. 155, erroneously seeks its origin in Middle Helladic matt-painted wares.

14) Fragment of alabastron. Only the base preserved. 'Wheel' pattern with two circles in the middle and four pairs of radiating, curvilinear spokes. Yellowish-green clay; black varnish.

15) Fragment of 'Tea-cup' (Fig. 29: 7). Preserved h. 9.0 cm. Double axes in panels as on No. 7. Fragment of handle with obliquely applied, vertical band. Greenish-grey ware; brownish-grey varnish. Quality inferior to that of No. 7.

16) Fragment of stemmed goblet. H. 11.8 cm. Late type with sharp shoulder. Disk-foot. Yellowish-red ware; undecorated.

17) Scoop-lamp, handle missing. (Fig. 28: 3). H. 6.0 cm., d. 10.5 cm. Clearly marked disk-bottom. A slight groove in the rim opposite the attachment of the handle. Black, comparatively thin ware; undecorated. Cf. No. 2.

Miscellaneous finds (Fig. 30).

From the long shaft.

18) Sealstone of glassy substance — the surface is brownish, white by flaking off. D. along the string-hole 1.7, perpendicularly to it 1.8 cm. The representation (Fig. 31) parallel to the threading hole. Standing horned sheep or goat with a figure-of-eight shield in front below the head and another between the legs beneath the belly.

NILSSON is of the opinion that the shield was a purely decorative addition — a favourite decorative theme —, also used on gems to fill an empty space[1]. EVANS endows it with a religious significance, in my opionion rightly, pointing to parallels from other spheres of culture and above all to those amuletic beads in shield form which occur in Crete as early as the end of Early Minoan[2]. I agree with his opinion that the shield is a symbol both of temporal power and divine protection[3].

19) A bi-conical bead of amethyst (Fig. 30: 2). D. along threading-hole 1.5, across 1.9 cm.

The material came from Egypt and perhaps, occasionally, the finished products. Amethyst beads have definite Late Helladic I or II associations, cf. WACE, *Chamber Tombs*, p. 208. For the bi-conical shape cf. *Asine,* p. 252.

20) A conical button (Fig. 30: 3). D. along the string-hole 1.3, across 1.6 cm. Hollowed out around the hole on the under side, flat on the others. Greyish-brown clay. Shape, material, and date cf. *Asine*, p. 252.

Fragment of similar object.

21) Arrow plate of bronze (Fig. 30: 4). L. 3.2 cm., greatest br. 1.4 cm. Deep incision, long wings with curved sides.

As to the arrow plates of bronze and their first appearance cf. EVANS, *Palace of Minos*, IV, p. 838 ff. In our tomb we have some of the oldest specimens known and they confirm BLEGEN's opinion regarding the relative age of the different types, cf. *Prosymna*, p. 340 ff.

22) Longitudinal bead of glass (Fig. 30: 5). L. 1.5 cm., br. 1 cm.

23) Glass beads of different kinds (Fig. 30: 6): 17 globular, d. 1.5—1cm., 4 flattened, h. along the stringhoole 0.7—0.5 cm., br. 1—0.5 cm. For the material cf. Appendix p. 198.

From the floor of the chamber.

24) Arrow plate of bronze (Fig. 30: 7). L. 4 cm., greatest br. 1.7 cm. Deep incision, long wings with curved sides (cf. no. 4). Two small holes at the fork of the barb are

---

[1] Cf. NILSSON, *Minoan-Mycenaean Religion*, p. 351 ff.

[2] Cf. EVANS, *Palace of Minos*, II, p. 50 ff ; III, p. 314 ff

[3] PERSSON, *The Religion of Greece in prehistoric Times*, Chapter III

designed for metal rivets which secured the blade to the end of the wooden shaft, this being provided with a slit for the reception of the arrow plate.

25) Fragments of wild boars' tusks, presumably from a helmet.

* * *

All the pottery that was found in the long bone shaft may be classified as Late Helladic I. There are perfect parallels to the material found e.g. in tomb 518 at Mycenae. No. 5 and No. 6 may be compared with WACE, *Chamber Tombs at Mycenae*, Pl. XLI, 37, No. 7 with *ib.* 36. No. 8 with stipple ornament (ostrich egg decoration) has also the characteristic tea-cup shape and, according to the style of decoration, it may be referred to the same period. No. 9, alabastron, is of the older type, which is met with in the same tomb at Mycenae, cf. WACE, *ib.*, Pl. XL, and 17 and 20. For No. 10, askos, cf. what has been said above. No. 11, stemmed goblet, may be compared with WACE, *ib.*, Pl. XXXIV, 16 and 17 from tomb 517. Finally, as regards No. 12, the brazier, there is no evidence, it would seem, that militates against its being dated to the same period. Nevertheless, if doubts are entertained with regard to so early a date, we may refer to the fact that vessels of this kind were used in fumigating the tombs during the preparations for fresh burials, and on such occasions — i.e. when the tomb was opened to receive a later burial — the brazier may have been crushed and its fragments thrown among the offerings from the earlier burial. Thus, even if it may not be dated to so early a period as Late Helladic I, its presence is not in conflict with the conclusion that the remains in this shaft are those of a single, primary, burial.

The homogeneous pottery contents of this shaft also afford a means of dating the gem depicting a goat as well as the arrow plate of bronze, a forerunner of the type with smaller wings and straight sides. With regard to the glass beads this dating is of definite importance.

The contents of this shaft belong quite obviously to the oldest phase in the history of the tomb, and may thus be dated to Late Helladic I.

The fragments of the hole-mouthed jar with plastic rim which have been noted above under No. 13 belong to a somewhat later phase. In form and decoration it corresponds to a vase from tomb 518 at Mycenae, cf. WACE, *Chamber Tombs*, Pl. XXXIX, 4. The same applies to No. 15, the large 'Tea-cup' with double-axe pattern, of the same type as No. 7, found in the shaft, as well as No. 14, alabastron. All these vases may similarly be referred to Late Helladic I, though to a burial of somewhat later date than that found in the long shaft, for not a single sherd of these vases appeared in the shaft — they all lay on the floor. They must have been placed in the chamber after the closing of the shaft, or, at least, they must have still been intact at that time.

The fragments of the stemmed goblet with sharp shoulder that were found just to the left of the doorway, as well as the black scoop-lamps, No. 16 and No. 17 respectively in the inventory, belong to Late Helladic III, the last phase of the tomb.

The sherds in the dromos extend over an equal span of time, from Late Helladic I to Late Helladic III inclusive.

The fragments of the alabaster vase were found in the dromos fill, except a piece which was discovered close by the rear wall in the outer chamber. It is of 'Egyptian alabaster', easily distinguishable from the Cretan by its more solid consistency and typical banding [1]. This vase undoubtedly belongs to one of the two earlier phases in the history of the tomb. We had previously found fragments of a similar alabaster vase of somewhat broader shape, in chamber tomb No. 2 at Dendra [2].

The fact that only scanty finds were made in the side chamber, comprising a few sherds and a small fragment of a cranium, may possibly indicate that it was mainly intended for purposes of worship.

Chamber Tomb No. 7.

The dromos slopes gently inwards (Fig. 32). It has a length of 13.30 m. and a width of 1.15 m. at the outer end, of 1.45 m. at the inner end. At the outer end some stones of the original blocking wall were still *in situ.* A road now cuts at right angles across the dromos and when this was constructed the original filling of the dromos had been replaced by stone packing as a foundation for the roadway. The upper side of the roadway is bounded by a terrace wall which crosses over and partially extends down into the dromos at its inner end. In this section of the dromos, at a height of 1.30 m. above its floor, 2.75—3 m. from the inner wall, solid stone packing was found, which bore the appearance of three shell walls, one outside the other. They are undoubtedly connected with the opening of the chamber for secondary burials.

The stomion, which had a depth of about 1.25 m., a width of 0.90 m. and a height of 1.42 m., was only filled to approximately half its height with the original stone packing; the upper layers had been thrown down into the chamber (Fig. 33). At the transition from the dromos to the stomion a low step occurs, about 15 cm. high.

The chamber, roughly rectangular in shape, is about 3.50 m. long and 3.25 m. wide Sections of the roof had fallen in, but its original height along the centre axis was probably about 1.90 m. Five shafts have been sunk in the floor of the chamber. The innermost, great shaft, shaft No. I, which is roughly rectangular in shape, has a length of about 1.50 m., a width of 0.60 m., and a similar depth of 0.60 m. The other shafts, Nos. II—IV, are irregular in shape and relatively shallow but the small shaft in the inner, right-hand corner, No. V, is different in character. The shafts Nos. I, II, III, and IV were filled with earth, in which skeletal remains, pottery and some minor objects were found.

Shaft No. V has a length of 0.42 m., a width of about 0.20 m., and a depth of 0.25 m. Here a deposit of bronze objects was found which had obviously been crushed into the pit in order to make the space hold them all. This deposit consisted of two crushed bowls, a mirror, a short sword, a long, one-edged knife and two cleavers.

---

[1] Cf LUCAS, *Ancient Egyptian Materials*, p 56 ff.

[2] Cf *Royal Tombs*, p 101, Fig 79

It is difficult to determine the number of skeletons because of the fact that all the shafts except shaft V have evidently been searched by grave-robbers. But there were at least five crania, four in shaft IV and one on the floor of the chamber.

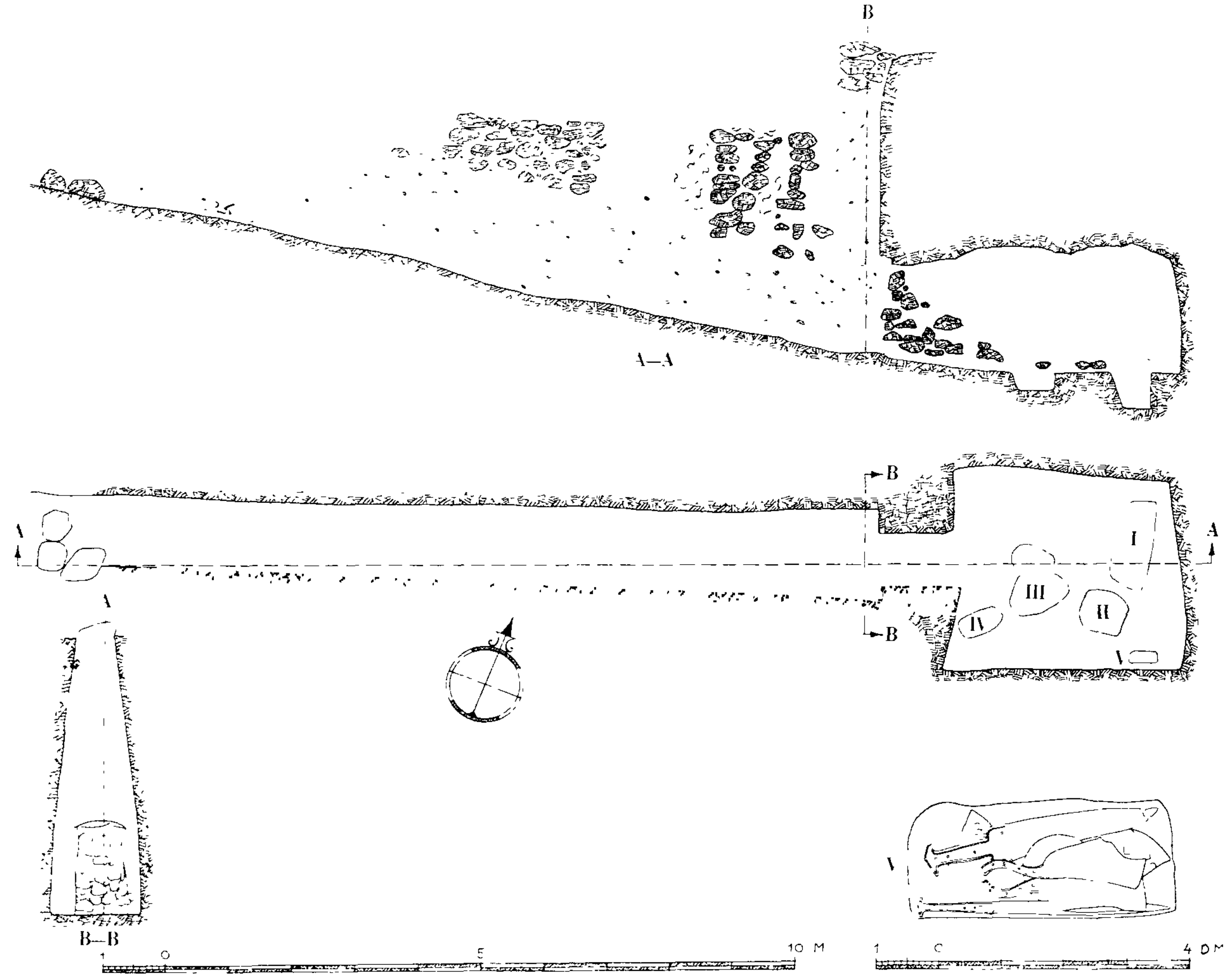


Fig 32. Plan and sections of chamber tomb No. 7

In approximately the middle of the chamber, and partly covering shaft III, there was a layer of charcoal and ash, made by the purification fire, when the tomb was being prepared for the latest interment.

Finds.

In the earth-filling of the dromos we found a quantity of sherds of Late Mycenaean vases, including a large number of stemmed goblets[1].

---

[1] Cf BLEGEN, *Prosymna*, p 237 f.

In the stomion.

1) Female figurine with crescent-shaped body (Fig. 34: 1). H. 11.0 cm., br. 5.8 cm. The head has a pinched-out face and a circular hat, concave on top; plastic breasts and braided hair; solid columnar stem with spreading foot. Painting in the form of vertical strokes on the upper part of the body, two bold strokes on its lower part. The head-gear is painted on the upper and lower edges and partly on the top. Yellowish-grey clay; black varnish.

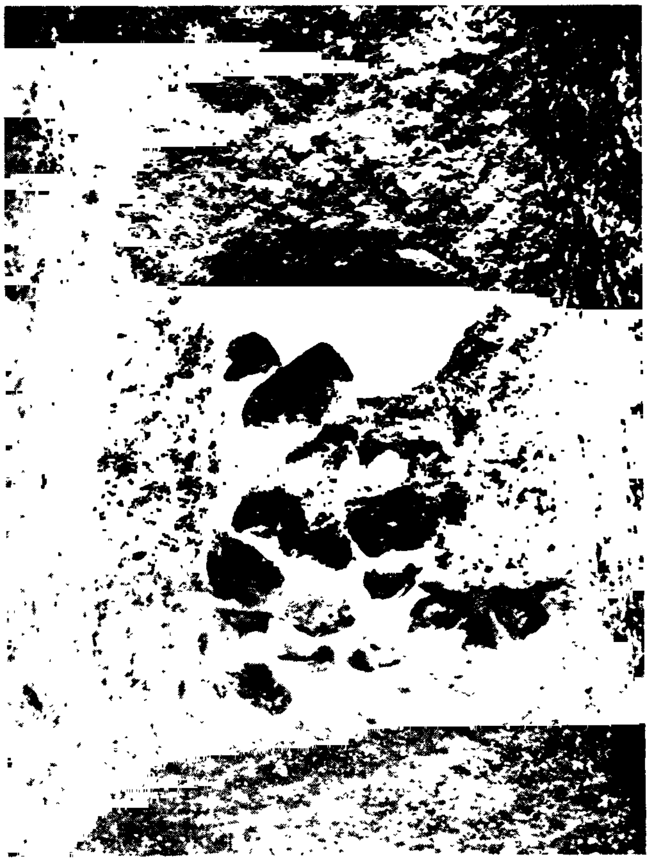


Fig 33 The door with stone packing

For the different types of female figurines cf. BLEGEN, *Prosymna*, p. 355 ff. I am unable, however, to accept his opinion that they are 'playthings' (*ib.*, p. 256), but still consider them, when found in tombs, counterparts of the *ushebtis* of the Egyptian tombs (cf. *Royal Tombs*, p. 89).

From the chamber.

Pottery.

2) Shallow bowl with two broad horizontal ribbon handles (Fig. 34: 2). From shaft III. H. 9.0 cm., d. 16.8, across the handles 20.0 cm. Comparatively high form with relatively soft angular profile, flaring rim. Yellow clay; undecorated.

3) Alabastron (Fig. 34: 3 a—b). H. 4.3 cm., d. 11.0 cm. On the base a 'wheel' pattern occurs with four pairs of curvilinear spokes radiating from a circle, two concentric circles on the border. On the lower part of the body conventionalized rockwork in "switch-back" pattern, in each space between the handles a large stellaria. A line of dots runs around the base of the neck. Handle and neck painted. Yellow clay; dark-brown varnish.

4) Three-handled jar (Fig. 34: 4). Fragmentary. H. 19.0 cm., d. 15.0 cm. Foot painted. Bands about lower part of body; a large scale pattern in upper zone. The vertical handles and the neck are painted. Greenish-grey clay; black-brown varnish, mostly flaked off.

5) Lower part of a stirrup vase, on which only one handle remains. H. 8.5 cm., d. 11.8 cm. The body of the vase encircled by broad and narrow bands. Greyish-green clay; black varnish, mostly flaked off.

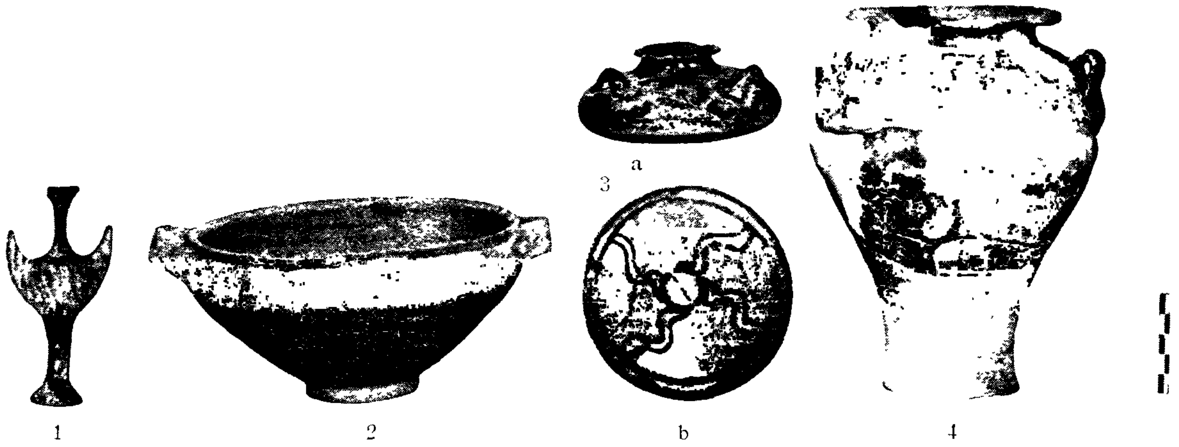


Fig. 34 . Finds from chamber tomb No. 7.

1) Female figurine (No. 1)
2) Shallows bowl (No. 2).
3 a, b) Alabastron (No. 3).
4) Three-handled jar (No. 4).

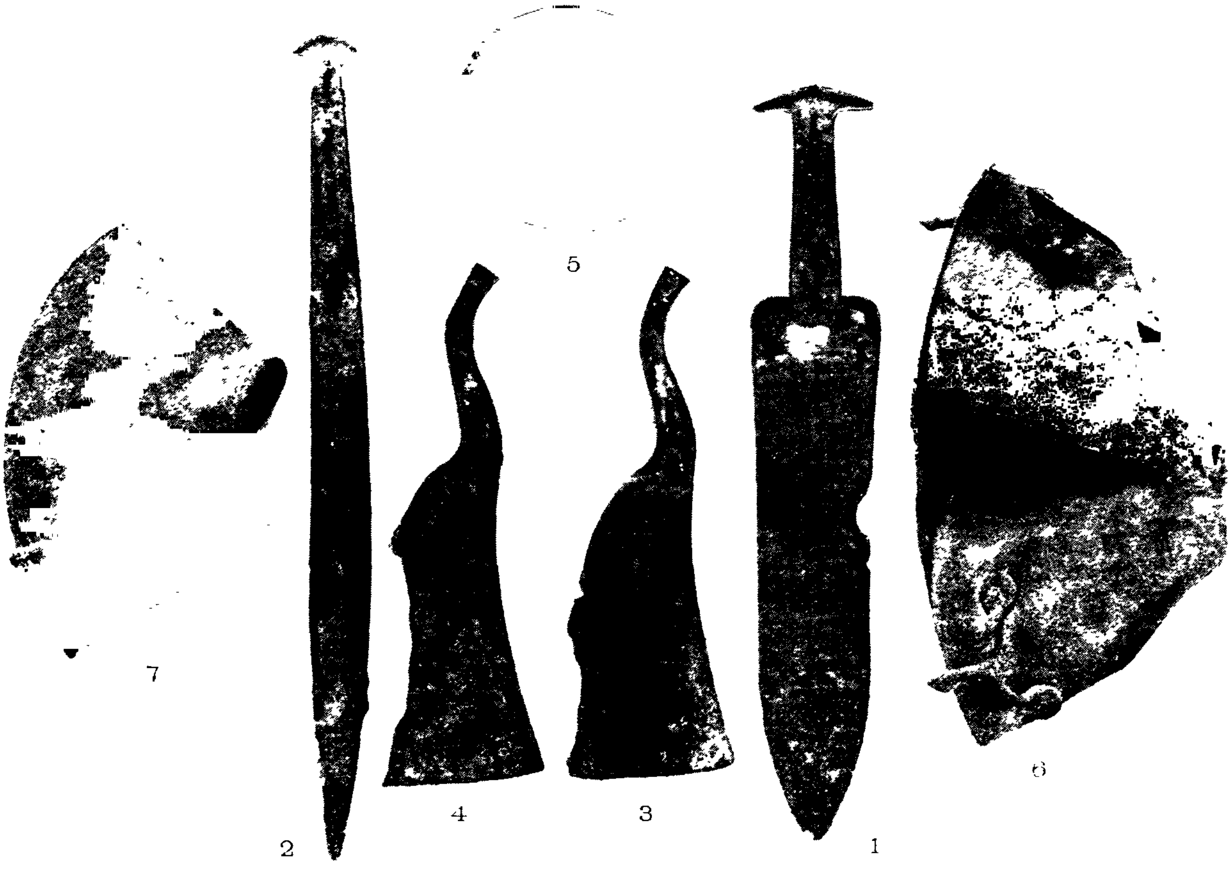


Fig 35 Finds in shaft V in chamber tomb No 7

1) Sword (No 9)
2) Knife (No 10)
3) "Razor" (No 11).
4) "Razor" (No. 12).
5) Mirror (No 13).
6) Open bowl (No. 14).
7) Open bowl (No. 14)

6) Stemmed goblet. Fragmentary. H. 9.2 cm., d. 9.6 cm. One loop-handle springing horizontally from the lip; the body has a sharp break at the shoulder, rising in a reverse curve to the lip, which splays outwards. Disc-foot. Yellow clay; unpainted.

7) Fragments of three similar stemmed goblets.

8) Fragments of large cooking utensil of red, in part black-burned ware.

Bronze.

In shaft V the following five bronze objects were found:

9) Short sword (Fig. 35: 1). L. 38.0 cm., br. 6.5 cm. The hilt is bordered by a raised flange which continues for some length down on the shoulder of the blade. Small fragments of the handle, probably of wood, still remain. On the handle, 5 cm. from its upper end, there is a crack, to be observed on both sides. In order to repair it, bronze mountings shaped like an 8, 4.5 cm. long and about 2 cm. broad, had been fastened to the blade by means of two short rivets at each end. The hilt had been attached by five long rivets, two of them on the shoulder of the blade. The pommel is flattened. The blade tapers slightly in a double curve and contracts sharply near the end to a blunt tip.

This short sword type belongs to the Third Late Helladic period; cf. *Royal Tombs*, p. 97, No. 23, and BLEGEN, *Prosymna*, p. 336. who classifies it under Daggers, wrongly in my opinion (our specimen corresponds to his type *d*). BLEGEN himself, however, admits "that this weapon was made rather for a slashing stroke than for thrusting".

10) Knife (Fig. 35: 2). L. 41.0 cm., br. 3.0 cm. One-edged, long, and slender. The hilt is bordered by a raised flange. Crescent-shaped pommel. Three small rings at the transition to the hilt. The hilt was attached by means of five through-rivets and between them there were smaller, decorative rivets with large heads, one of which is preserved. The knife has a small concave angle at the point of intersection of the haft and the blade, thus the blade is somewhat broader than the haft. Two parallel, incised lines run along the back of the blade.

For the decoration of the handle, cf. *Royal Tombs*, p. 98, No. 27.

11) "Razor" or cleaver (Fig. 35: 3). L. 25.5 cm., br. 8.0 cm. The hilt is bordered by a raised flange. Small fragments of the wooden handle still remain; it was attached by means of four through-rivets with smaller, decorative rivets between them, one of which was still preserved *in situ*. Along the back on both sides three parallel lines, which follow the curve of the back.

For the type and use cf. *Royal Tombs*, p. 97, No. 25—26; BLEGEN, *Prosymna*, p. 347 f.

12) "Razor" (Fig. 35: 4). Identical with last — also as regards the dimensions. A portion of the edge is to be found on the knife described under No. 10, to which it had become attached through verdigris.

13) Mirror (Fig. 35: 5). D. 11.6 cm. parallel with a line connecting the two attachment holes, and d. at right angles to it, 11.2 cm. Th. 0.2 cm. Traces of wooden handle.

14) Open bowl with wishbone-handles (Fig. 35: 6). Crushed. H. of side 15.0 cm.,

greatest preserved br. 29.0 cm. The horizontal handles, each fastened with two rivets, have vertical projections in the middle, terminating in conical buttons.

15) Open bowl with wishbone handles (Fig. 35: 7). Crushed. H. of side 13.0 cm., greatest preserved br. 20.0 cm. Handles as on the preceding but with flattened conical buttons.

For the form compare from the mainland *Royal Tombs*, p. 94, No. 6; *Asine*, p. 394, No. 7, Fig. 257 and BLEGEN, *Prosymna* p. 353; from Crete, EVANS, *The prehistoric Tombs of Knossos*, in *Archaeologia* LIX, p. 444, Fig. 52 (from the Chieftain's Grave) and SAVIGNONI, *Necropoli di Phaestos*, in *Monumenti Antichi* XIV, p. 544, Fig. 28.

The wishbone handle is of the highest antiquity and very widely diffused. EVANS, *Palace of Minos*, I, p. 38, characterizes it as a "typical Neolithic handle" in Crete and points to parallels and derivatives in Cyprus, the Troad, and Northern Greece, which is not surprising, since EVANS, no doubt rightly, explains this handle type as being "derived from the use of a forked withy or osier sprig with its two flexible ends tried round a wooden bowl". It is to be observed in an atrophied form on certain Early Minoan chalices, but thereafter it disappears in Crete, reappearing, however, in a somewhat modified shape with vertical knobbed projection during Late Minoan II. In my opinion it then diffused to the Greek mainland, where it is especially characteristic for Argolis during Late Helladic II—III, cf. the Queen's silver cup from the bee-hive tomb at Midea, *Royal Tombs*, p. 49 f. From there it was introduced into Cyprus. The whole vessel type with handle — the so-called "Knopfhenkelschale" — was translated into clay during Late Helladic III. In the museum at Nauplion there are two, still unpublished, clay specimens from a Late Helladic III chamber tomb in Berbati.

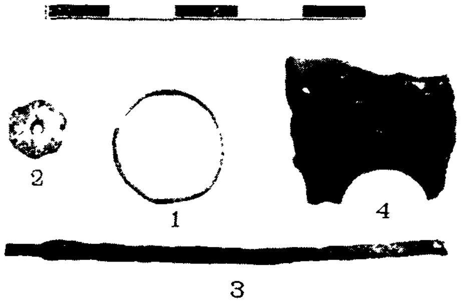


Fig 36. Miscellaneous finds from tomb No 7.
1) Golden ring (No 16).
2) Glass bead (No. 17).
3) Bronze pin (No. 18).
4) Bone mounting (No. 19).

28 bronze rivets or heads of such from this shaft were used as mountings on swords and knives.

Miscellaneous finds.

From shaft III.

16) Small gold ring of twisted gold thread (Fig. 36: 1). D. 1.8 cm. The twisted gold thread is wound in 4 ½ revolutions. TSOUNTAS found a similar ring in tomb 42 at Mycenae [1].

Fragments of bone mountings and bronze.

On the chamber floor.

17) Disc gadrooned bead of glass (Fig. 36: 2) D. 0.7 cm. Light coloured. Fragment of another. — Identical beads from Egypt, XIX Dynasty [2].

---

[1] Cf *Ephemeris Archaiologiki* 1888, p. 151, 167, Pl IX, 12.

[2] Cf. BECK, *Classification and Nomenclature of Beads and Pendants*, in *Archaeologia* LXXVII, p 25, fig. 21, A 3, e.

18) Fragment of bronze pin (Fig. 36: 3).

19) Fragment of bone mounting with round hole and engraved patterns (Fig. 36: 4). L. 2.5 cm., br. 2.2 cm. Segmented loop around bowl-shaped cavities. Possibly fragment of a hiltplate which has formed part of the attachment to a sword of the "cruciform" type [1].

* * *

The tomb inventory, both pottery and bronzes, dates this tomb to Late Helladic III, but the secondary blocking walls in the dromos together with the remains of at least five skeletons in the chamber are evidence that the tomb was used for burial on various occasions during this period. The bronze sword shows that the bronze deposit belongs to a relatively late phase. The small alabastron, described above under No. 3, belongs to one of the earlier interments, as does also in all probability the three-handled jar described above under No. 4. The small figurine found in the stomion, is probably to be referred to one of the later burials.

Chamber Tomb No. 8.

The dromos, in its present form, has a length of 12.85 m. (Fig. 37). Its breadth at the outer end is 1.12 m. At a distance of about 5 m. from the outer end it widens to a breadth of 1.15 m., its width slowly increasing to 1.70 m. at the inner end. Its height at the stomion is 4.80 m. A packing of loose stones thrown in from above covered the rock in the outer part of the stomion, for a distance of 6.75 m. from its outer end (Fig. 38). There was also a rubble packing in the upper part of the filling nearest the stomion, extending into the stomion for about 2 $^1/_2$ m. This stone packing, about 1.70 m. deep, rested immediately on a layer of earth, somewhat more than 1 m. thick; below this layer, in front of the stomion filling proper, there was another stone packing, descending to within 1 m. of the bottom level. A band of rain-filtered gravel which rests against this stone packing clearly indicates that only a relatively narrow shaft was dug at a later burial. On that occasion only the upper part of the stomion fill was removed, providing an opening about 1 $^1/_2$ m. high. Another layer of rain-filtered gravel was found about 40 cm. below the one just mentioned and its extension out into the dromos, as well as the distribution of minor finds of amethyst beads and of carved wild boars' tusks in the dromos, indicate that an older passage to the tomb chamber was once in use, which extended somewhat more than 4 m. out into the dromos.

The stomion has a breadth of 1.18 m. at the bottom, which, at a height of 60 cm., is reduced to 1.05 m.; above this level the breadth slowly decreases to about 80 cm. The height of the stomion in its present condition is 2.55 m.

The oldest blocking wall was preserved to a height of about 90 cm.; it was covered by a layer of rain-filtered gravel which extended through the greater part of the fill; on top of this layer a later filling occured, about 85 cm. high (Fig. 39). The upper part of the stomion lacked regular stone filling.

---

[1] Cf. EVANS, *Palace of Minos*, IV, p. 854, fig. 837.

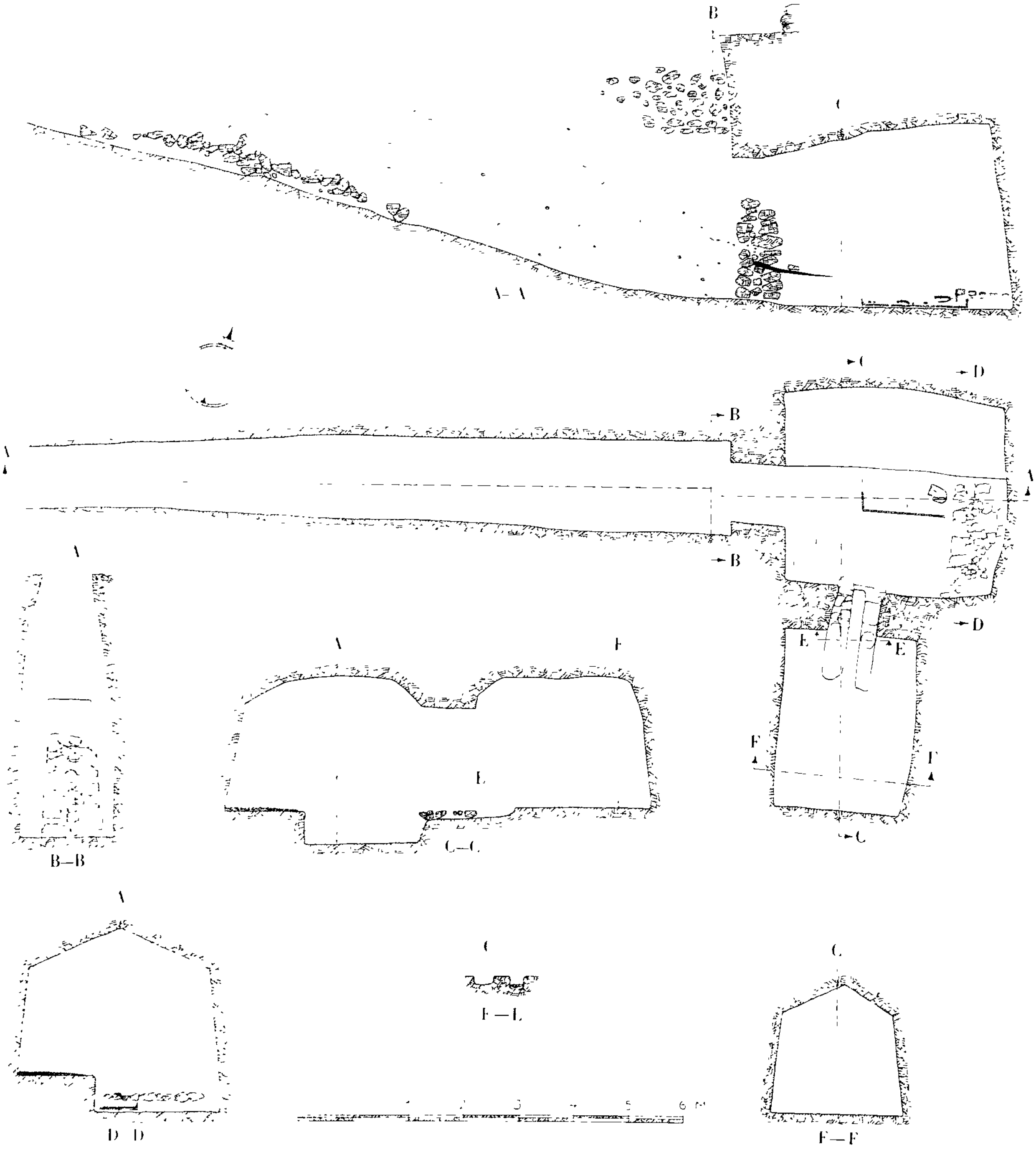


Fig. 37 Plan and sections of chamber tomb No. 8

This tomb, like tomb No. 6, has two chambers, both roughly rectangular in shape and both with saddle roofs. The outer chamber measures 4 by 3.75 m. and has in its inner part a height of 3.35 m. under the ridge. The section from the left of the door to the rear wall of the chamber forms a broad bench, 60 cm. high (Fig. 40). Along the rear wall of the chamber a built-up stone bench about 30 cm. high and nearly 1 m. broad was situated on the lower chamber level. In the long wall on the right a doorway 0.80 m. broad, equally deep, and 1.85 m. high, led into a side chamber, 3.25 by 2.50 m., 2.40 m. high under the ridge.

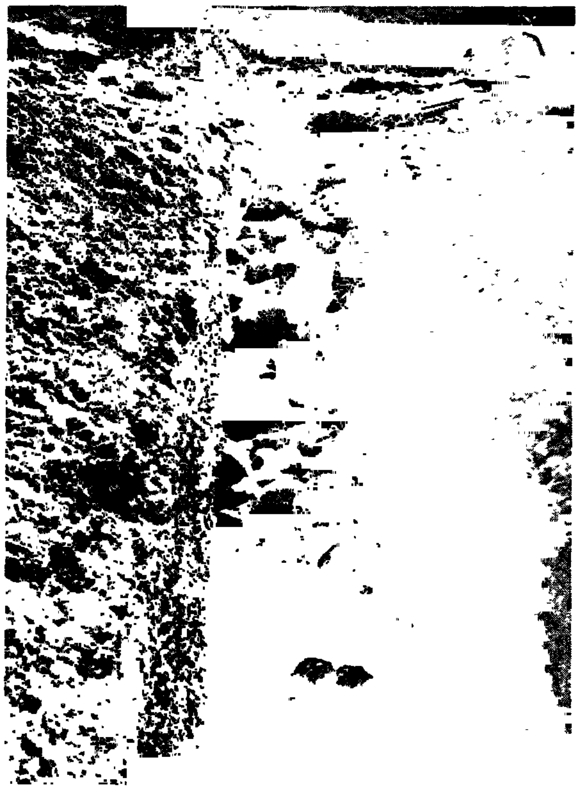


Fig. 38 Stone packing in the outer end of the dromos of chamber tomb No 8

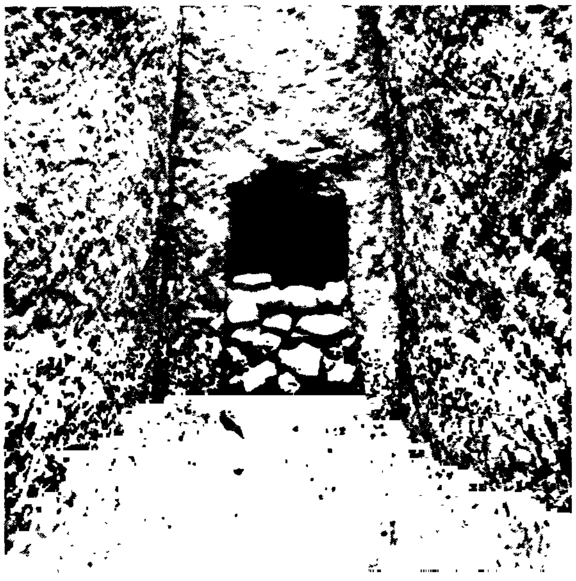


Fig 39. Stone packing in the door of chamber tomb No 8.

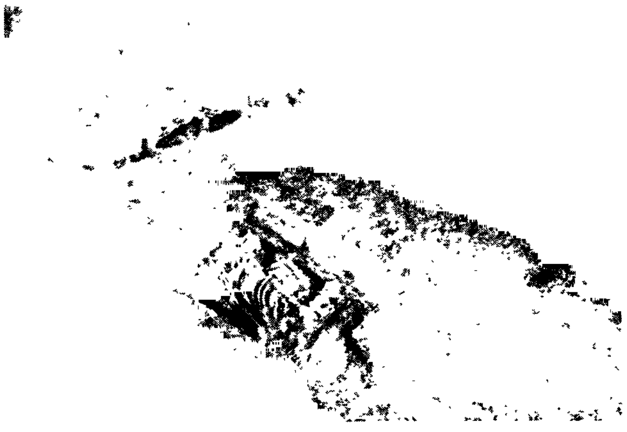


Fig. 40. Interior of the outer chamber. To lower left: bench, cut in the rock; to upper left: built-up stone bench; to right: entrance of the side chamber.

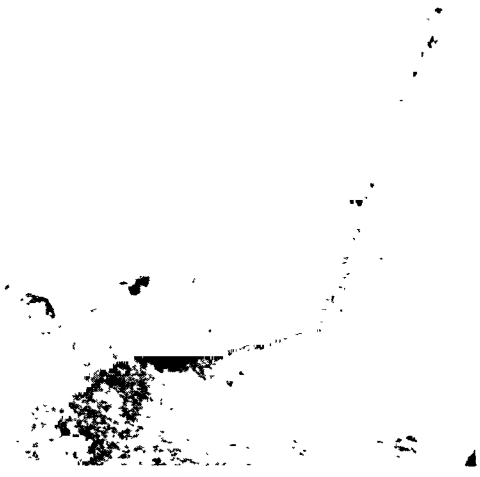


Fig. 41 Entrance of the side chamber with stone filled grooves To the right stomion with lower portion irregularly hewn

This doorway together with the whole side chamber is on the same level as the bench on the left side of the outer chamber. In close proximity to the parastades two grooves occur, 15—25 cm. deep, which extend 80—90 cm. into the side chamber (Fig. 41). They were fitted with carefully placed stones.

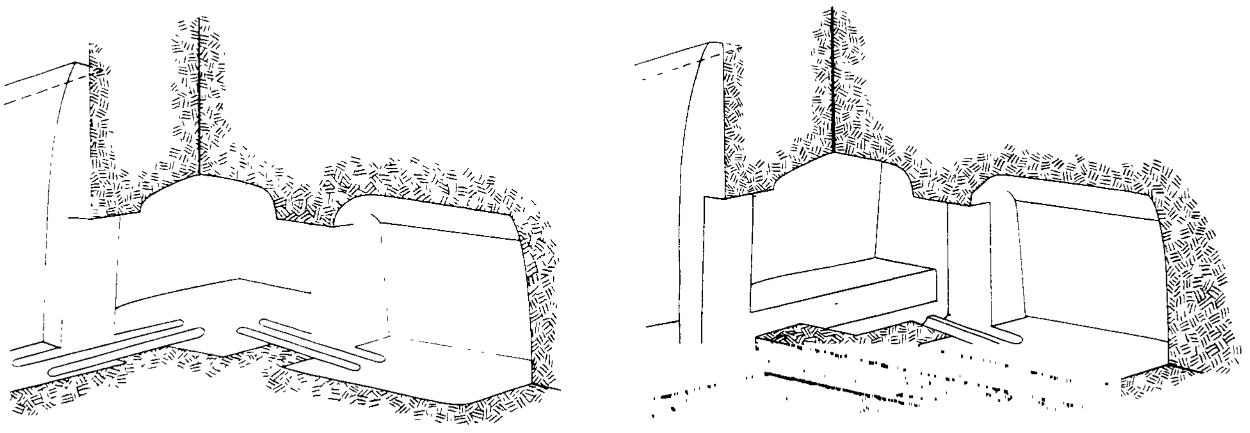


Fig 42 a) Original shape of chamber tomb No 8 b) Secondary shape of chamber tomb No 8

The unusual construction of this tomb permits us to determine three different building phases. We have to reckon with an original tomb of about the same type as tomb No. 6 with a relatively short, broad, and steep dromos, the outer end of which was probably located at the point where the existing dromos suddenly becomes narrower, at about 5 m. distance from its outer end. It led down to a chamber, whose floor was on a level with the left-hand bench in the chamber and with the floor level of the side chamber (Fig. 42, a). The doorway of this older tomb must have measured almost 2 m. in height and grooves similar to those that are still found in the doorway of the side chamber must have once existed. There is an indication of this in the irregularity of the lower part of the right stomion wall.

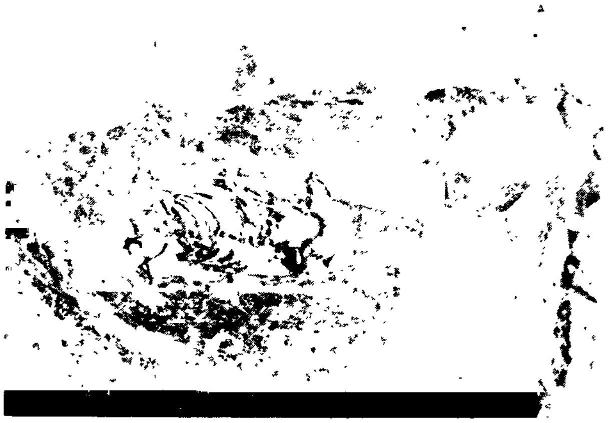


Fig 43 Skeleton in remains of wooden coffin Note the black line in the earth below the skeleton. At the left forearm a dagger, at the foot end a helmet

Fig 44 Remains of the wooden coffin after excavation. The upper edge represents the coffin, the lower is a section through the earth beneath the coffin.

The tomb was later re-hewn in such a manner that the dromos assumed its present shape by being lengthened and deepened. The stomion of the outer chamber was also deepened, and during this process the grooves disappeared. In the outer chamber the floor level of the section immediatly in front and to the right of the dromos was lowered 60 cm. (Fig. 42, b).

The third building phase is indicated by the stone bench along the rear wall of the main chamber. This partially intersects a wooden coffin, placed on the lower floor level of the chamber belonging to the second building period. The stone bench also covers some finds which must certainly be ascribed to an interment during the second period.

Four crania were found in the chamber. One of them certainly belongs to the skeleton that was found *in situ* in the remains of a wooden coffin placed close by the rock bench; the foot end of the coffin was partially destroyed when the stone bench was built later (Fig. 43, 44). For details see below p. 111. The other skeletal fragments lay scattered over the lower parts of the outer chamber, in addition to which a mandible was found in the dromos fill.

Finds.

The finds recorded below were made in the outer chamber, unless otherwise stated:

1) Lower part of a large Palace Style vase: three-handled jar with sturdy raised ring around the flat base (Fig. 45). The whole lower part and one side inclusive of shoulder section preserved. Preserved h. 54 cm. Lower part completely painted. Triple five palm system with the middlemost ascending vertically midway between the handles; the others arranged in pairs of diminishing size and curving outwards in order to fill the whole surface. In the intervening areas space-filling motives are employed, consisting of tendrils with ivy leaves, large stellariae, in addition to groups of wavy lines of varying dimension arranged in pairs. Yellowish-green clay; black varnish.

This is obviously an adaptation of EVANS' "Three Palms Motive", cf. *Palace of Minos*, II, p. 493 ff. and also *Asine*, p. 419 f. In order to fulfill the decorative requirements the palm group has here undergone a transformation, now containing a group of five instead of three. The palms are of the Late Minoan I *b* type, the space-filling ornaments are such as are common on vases of this kind. For the groups of wavy lines cf. below p. 68.

Like the three-palm motif, the five-palm motif is patterned after Egyptian models. FURUMARK, *Studies in Aegean decorative Art*, p. 43, footnote 2, correctly refers to the Egyptian hieroglyphs for the arrangement.

2) Three-handled jar with horizontal handles (Fig. 46), found *in situ* to the right of the entrance to the side chamber. H. 35 cm., d. 30 cm. Plain colour round base, neck, and handles. Above base two horizontal lines. On body the 'ogival canopy': a doubly alternating pattern of waves arranged so that each crest corresponds with another above and below. Between them run pairs of curved lines fastened to loops and edged with dots. On upper body and shoulder is a similar wave-pattern, except that heart-shaped leaves, ivy leaves, are substituted for the upper row of inverted waves. Greyish-green clay; black and black-brown varnish.

The 'ogival canopy' pattern appears regularly on the Mainland of Greece; in Crete it is found only on a spouted jug from Palaikastro, possibly an import, and on a sherd from Knossos. — Thus it is definitely a Mainland motif, originating in Late Helladic I[1].

3) Fragment of jug with bridged spout (Fig. 47: 1). Only parts of shoulder zone and neck preserved. Preserved h. 18 cm. Greatest d. 28 cm. Raised ridge around the base of the neck. The top of the rim is flat. In the shoulder zone four large heart-shaped leaves occur, coupled to one another by stalks issuing from the base of the leaf and following its upper contour line. Between the great leaves small space-filling motives are present in the shape of trefoil-leaves. In the spaces within the great leaves, which are

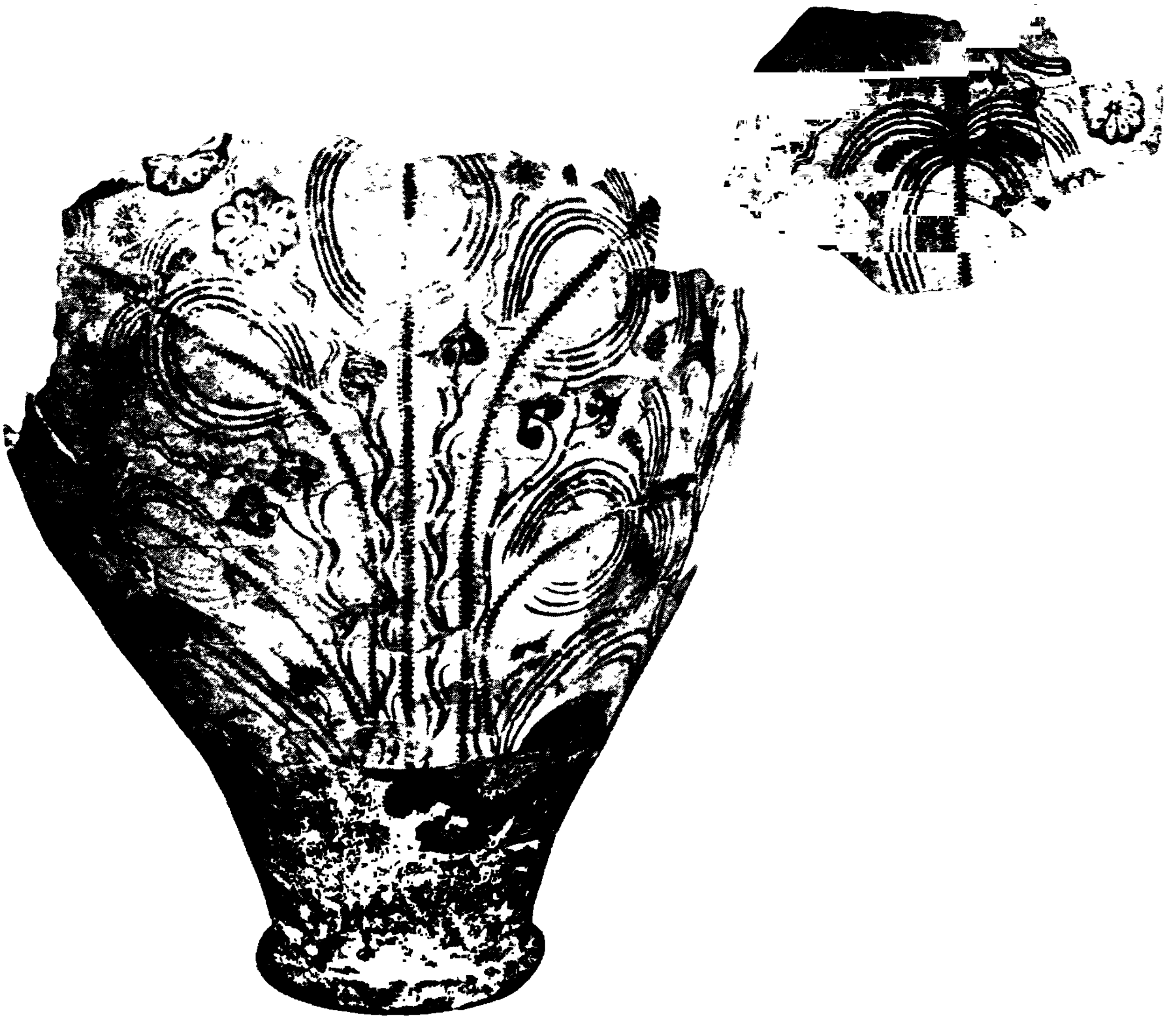


Fig 45. Parts of Palace Style vase from chamber tomb No 8 (Finds No 1)

drawn with bold contour lines, swastika lines and dotted lines are interspersed. There are also dotted lines in the empty spaces between the leaves. The low neck is decorated at the top and bottom by continuous lines, in the intermediate zone a row of coupled spirals. The rim is dotted. Black lines around the base of the handle and the spout. Extraordinarily fine, greyish-green ware; black varnish.

---

[1] Cf Evans, *Palace of Minos* II, p 489 f, fig 291 d; Wace, *Chamber Tombs*, p. 153; Blegen, *Prosymna*, p. 401.

For the form, which is originally Cretan, but is met with on the Mainland during Late Helladic I, cf. WACE, *Chamber Tombs*, p. 149, Pl. IV, 31; BLEGEN, *Prosymna*, p. 401 f., Pl. V, and fig. 665. As to the pattern cf. BLEGEN, *ib.*, p. 417, figs 106, 205.

4) Fragment of shallow bowl with two horizontal ribbon handles just under rim. H. 5 cm., d. roughly 13.5 cm. Yellow clay; undecorated.

5) Small, handleless cup (Fig. 47: 2). H. 2.5 cm., d. 8.3 cm. Coarse, red ware; undecorated.

6) handleless cup (Fig. 47: 3), found in the dromos H. 4.5 cm., d. 9.7 cm. Reddish-yellow clay; undecorated.

7) Fragment of stemmed goblet, from the dromos. H. 10.7 cm. Sharp-angled shoulder. Handle projecting horizontally from the rim. Disc-foot. Reddish-yellow clay; undecorated.

Numerous pottery fragments from the dromos, representative of the whole Mycenaean period.

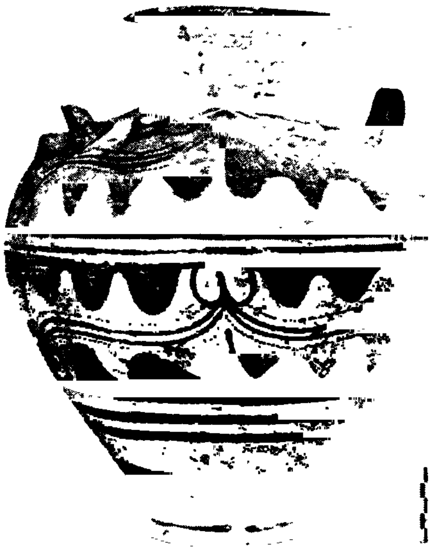


Fig 46 Three-handled jar (No. 2)

Bronze.

8) Helmet, found in the angle between the rock ledge and the stone bench (Pl. I: 1—2). H. 25 cm., depth 32 cm., br. 22.5 cm. Slightly deformed. On the top two large holes for attaching helmet adornment. Round the whole edge, which is wound around a bronze wire, there are holes, interspaced about 1 cm., for fastening the lining. At a distance of about 17 cm. from the outer edge of the strongly projecting cheekpieces there is, on both sides, an infolding of the edge of the helmet which runs in the shape of a shallow groove, first in a somewhat backwards-slanting straight line, then in a forward-curve, about 15 cm. above the lower edge, marking the position of the ears. For the shape of the helmet, see below p. 119.

9) Dagger, found close by the left forearm of the skeleton (Fig. 48: 1). L. 24.5 cm., br. at hilt 5.2 cm. Sharply triangular shape. The hilt had been attached to the blade by three silver rivets, a fourth rivet, also of silver, was probably inserted near the end of the hilt in order to provide a means of attachment for the pommel. The dagger is of the well-known Shaft Grave type and can hardly be dated later than the first half of Late Helladic II[1].

---

[1] Cf a similar find in tomb 529 at Mycenae, WACE, *Chamber Tombs*, p. 189, "not later than the first half of L. H II"; finds from the Argive Heraeum by BLEGEN, *Prosymna*, p 330, Daggers a.

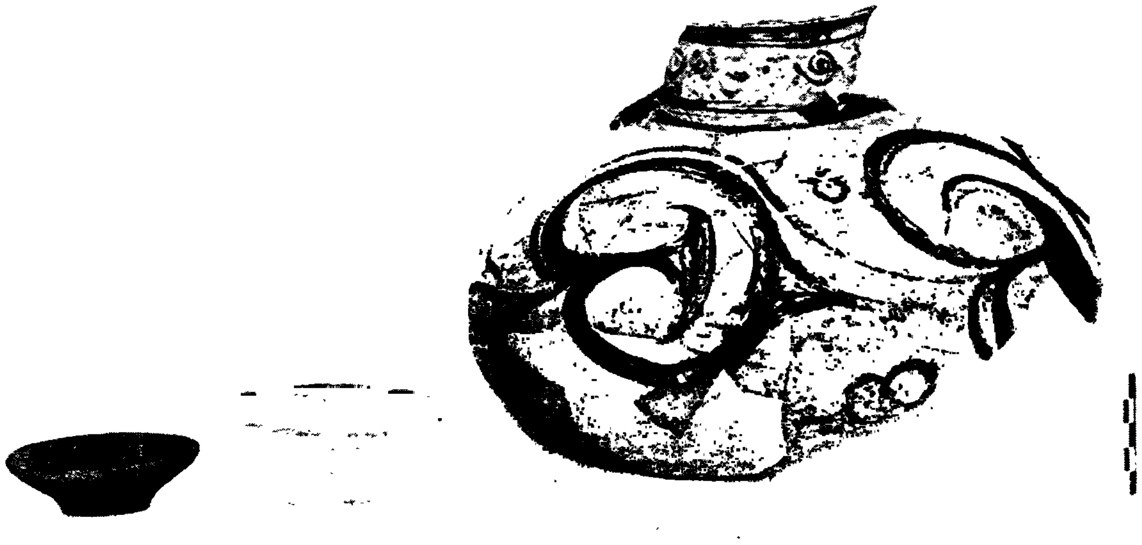


Fig. 47. Finds from chamber tomb No. 8.

1) Fragment of jug with bridged spout (No. 3).
2) Handleless cup (No. 5).
3) Handleless cup (No. 6).

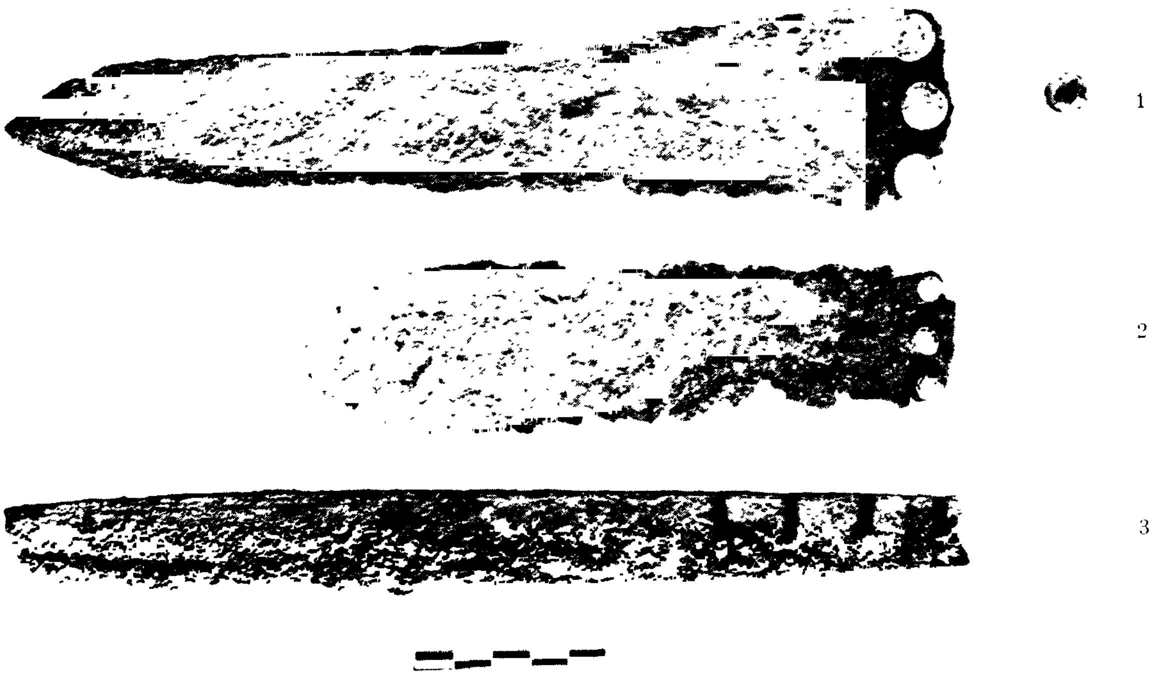


Fig. 48 Bronze objects from chamber tomb No. 8

1) Dagger (No. 9).
2) Broad-bladed knife (No. 10).
3) Single-edged knife (No. 11).

10) Short, double-edged, broad-bladed knife (Fig. 48: 2). Found under the stone bench close by the rear wall of the chamber. L. 16.5 cm., greatest br. near the tip 4.5 cm. The hilt had been attached by three silver-plated rivets.

For the type cf. BLEGEN, *Prosymna*, p. 332 ff, Daggers *b* in his classification. I find this classification incorrect, even if this knife originally developed out of an older dagger type. The dagger is a thrusting weapon, but the object we are dealing with here is definitely unsuited to such a purpose, since its blade is very thin, has a rounded tip and is broadest relatively near the tip. EVANS, *Prehistoric Tombs of Knossos*, in *Archaeologia* LIX, p. 507, calls it a razor, no doubt with some justification, for men were evidently in the habit of shaving, even their upper lips, in the Mycenaean age, and some kind of blade or knife must have been used for this purpose and none seems more suitable than the one in question. This also agrees with its relatively frequent occurrence in the tombs. Cf. EBERT, *Reallexikon der Vorgeschichte*, s. v. Rasiermesser.

11) Single-edged knife, somewhat broken off at both ends (Fig. 48: 3). Found on the rock bench at the rear wall of the chamber. Preserved l. 25 cm., br. 2.8 cm. The hilt has been attached by four through-rivets. An incised line runs along the back.

For the occurrence of the type cf. WACE, *Chamber Tombs*, p. 189 f.; BLEGEN, *Prosymna*, p. 342 ff.

12) Bronze lamp with open bowl and handle, found in the outer chamber in the corner to the right of the stomion (Fig. 49: 1). H. 5.2 cm., d. of bowl 15.5 cm., l. of handle-bowl-spout 31.5 cm., br. of spout 5.5 cm., l. of handle 13 cm. The handle which is attached to the bowl by three rivets, their heads on the inside, consists of a straight solid metal rod with a tapering end convenient for insertion into the interstices in the walls.

Two bronze lamps of exactly the same shape, but with thin handles, were found in the great bronze deposit in Chamber Tomb No. 2, cf. *Royal Tombs*, p. 94 f., Nos. 11 and 13, Pl. XXXII, 4, together with an example of that elegant type which first became known through an earlier find in the 'Tomb of Tripod Hearth' at Knossos, cf. EVANS, *Prehistoric Tombs of Knossos*, in *Archaeologia* LIX, p. 430, fig. 35 a. The plumper lamp type which the Dendra examples represent has, as far as I know, not been found anywhere else. It appears to me as a variety of the ladle or scoop of clay, which is very frequently met with in tombs as well as in settlements. Cf. Minoan-Mycenaean Lamps below p. 103.

Miscellaneous finds.

13) Worked pieces of wild boars' tusks (Fig. 50). 93 whole pieces and 44 fragments of three different types:

1. Pointed ends of tusks, cut off straight across at the basal end, then cut out in such a manner that, when placed together, they form a calotte with a small hole at the top. The upper ends of the pieces have been worked in order to provide an even base for a top-knob.
2. Curved pieces, evenly cut off at both ends, which have formed two zones on the helmet.

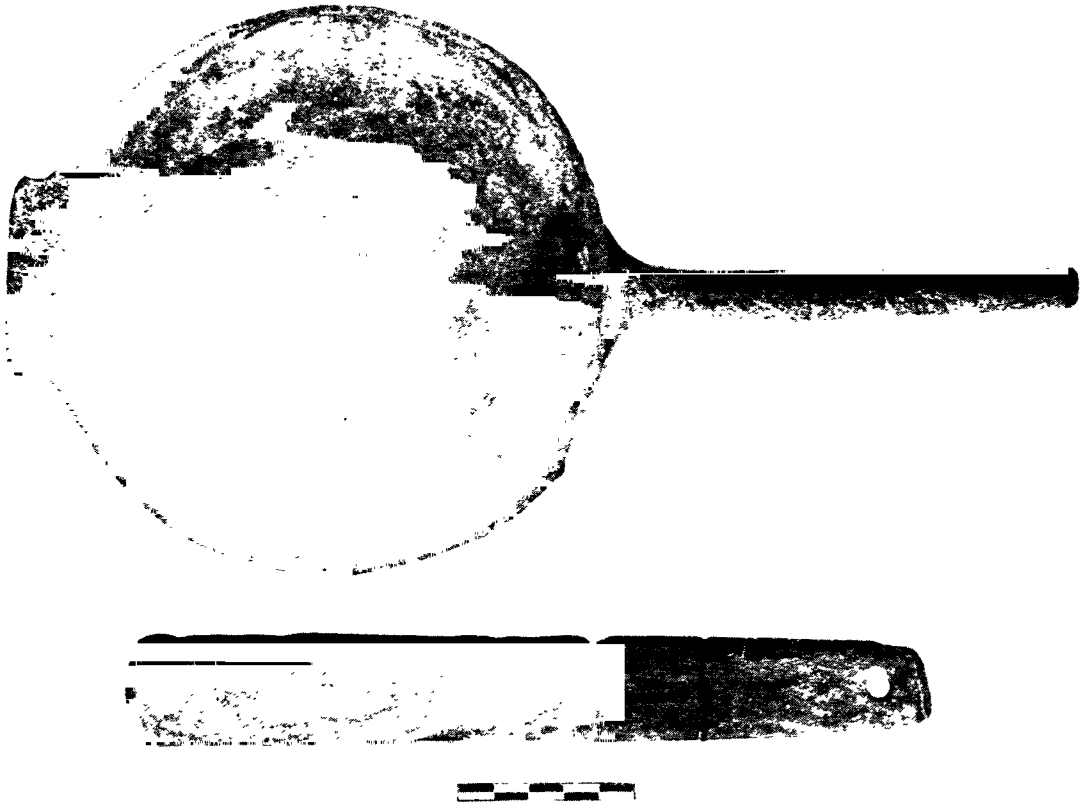


Fig. 49. Finds from chamber tomb No. 8.
1) Bronze lamp (No. 12).
2) Whetstone (No. 15).

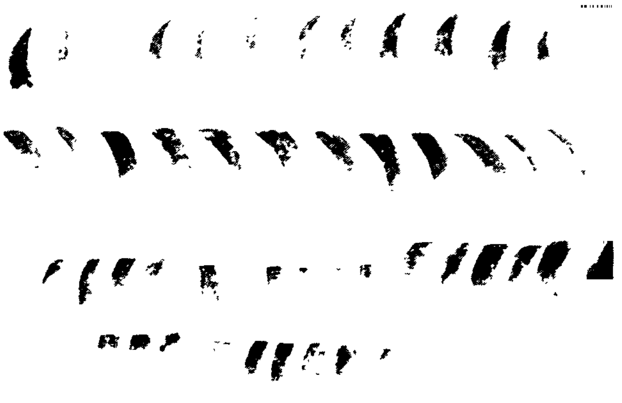


Fig. 50 Worked pieces of wild boars' tusks (Finds No. 13).

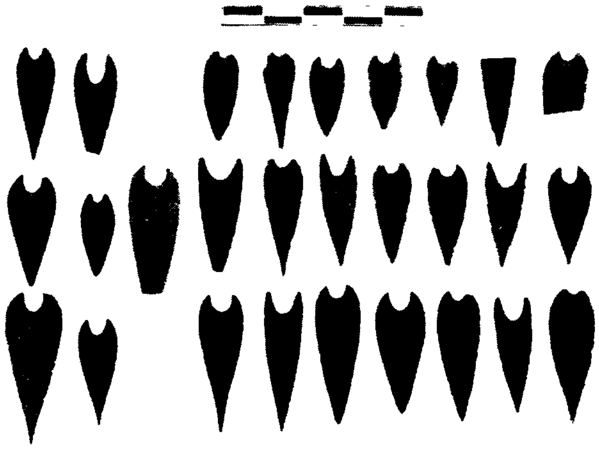


Fig 51 Arrow-heads (Finds No 17) To the left seven of flint, the others of obsidian.

3. Smaller pieces, also evenly trimmed at both ends, which were attached to cheek and chin pieces.

Most of the pieces were found in the outer chamber under the stone bench at the inner chamber wall, several of them were scattered on the chamber floor and some in the fill of the dromos.

For the appearance of the helmet cf. below p. 126 ff.

14) Ivory mountings of a wooden chest (Pl. II: 1—2), found in the outer chamber to the right of the stomion.

a) Two large ivory volutes, the 'whorl-shell' motif, 6.5 by 6.0 cm., with 8-petalled flower in the spiral eye, one of them provided with three inserted ivory tacks.

b) Two ivory mountings, 7 cm. long, 2 cm. broad, each adorned with three similar 'whorl-shells' with rosettes in the spiral eye.

c) Segmented ivory bars, one of larger size, about 24 cm. long, 0.8 cm. broad, and a more slender one, about 17 cm. long, 0.5 cm. broad.

d) Three dog-toothed mountings, 1.7 by 1.7 cm., about 0.3 cm. thick.

e) Thin, smooth bar, preserved l. 6.5 cm., br. 0.3 cm.

These mountings must have adorned a wooden box, about 36 cm. long, of similar form to the one Evans has reconstructed from analogous finds in a Minoan tomb, *Prehistoric Tombs of Knossos*, in *Archaeologia*, LIX, p. 434, fig. 40. A similar box was found in tomb 518 at Mycenae. Wace, *Chamber Tombs*, p. 84, dates it to Late Helladic I—II. Although we have spiral, as well as dog-toothed or notched pieces of the same kind as those on the box from Mycenae, the reconstruction proposed by Wace cannot be accepted in this case. The two volutes with the intermediate torus appear *in situ* on the photograph Pl. II: 1. The other pieces lay underneath. The two whorl-shell bands, on which the pattern of the two volutes is exactly repeated, were probably attached to the short ends of the chest, while the other pieces adorned its back. Cf. the box from Enkomi reproduced by Hall, *Civilization of Greece in the Bronze Age*, p. 228, fig. 302. The closest naturalistic model of our volutes is to be found in the 'argonaut' or, more correctly, 'whorl-shell' reliefs of the upper corners of the royal draughtboard, found in the throne room at Knossos, which Evans dates to "the closing phase of M. M. III"; cf. *Palace of Minos*, I, p. 474. The shells are adorned with a central boss of crystal, replaced on our ivory volutes by flowers, marguerites with eight petals, in the spiral eyes. The same arrangement with rosettes in the spiral eyes is often to be found in spiral patterns, for example on the spiral coiling that was found together with the miniature frescoes in Knossos dating to Middle Minoan III, cf. Evans, *Palace of Minos*, III, p. 30 ff., and the later spiraliform friezes from the 'Hall of the Double Axes' and from the Queen's Bath-room, cf. *ib.*, III, pp. 345, 383, as well as on Palace Style vases decorated with spiral patterns. On the ivory plaque the whorl-shells are mutually arranged in a manner exactly corresponding to their arrangement on the gold rim of the silver vase from tomb No. 10, cf. p. 91, where the connection between the shell and spiral motives is dealt with at greater length.

It is of the greatest importance for the discussion of the origin of the Ionic capital —

with or without the Aeolian as forerunner — that we are able to establish the fact that the whole volute member occurred as early as the Late Minoan and Late Helladic periods, even with interposed palmettes and a continuous segmented bar joining the two side spirals, corresponding to the egg and dart moulding of later times. Compare below p. 129 ff.

15) Whetstone, found under the stone bench, in three fragments (Fig. 49: 2). L. 23 cm., br. 3.3 cm. String-hole in upper end.

16) Sealstone of mottled agate, rather worn, its contours soft (Fig. 52). Found under the skeleton in the wooden coffin. D. 1.9 cm. String-hole vertical to the representation of a lion rending a bull.

The body of the lion is visible under and in front of the bull. The lion's rump is represented in a typical running schema, parallel with the bull's body and with the hind legs stretched out straight in the direction of the rump; the raised tail cuts across the bull's flank. The lion's forequarters has been turned half around on a peg in the middle of the trunk so that it is facing the bull. This is the schema employed for indicating a suddenly interrupted gallop, well known from the bull in the net on one of the Vaphio cups and the deer on the silver goblet from the bee-hive tomb at Dendra, cf. *Royal Tombs*, p. 53 f., Pl. XVII. One of the lion's forepaws rests on the bull's shoulder and it fastens its teeth into the bull's reverted neck. One of the bull's hind legs apparently rests on the hind leg of the lion (compare reversed schema below p. 82 f), the other is visible behind in the empty space; the tail points upwards and follows the rounded edge of the stone. We are evidently dealing here with a bird's eye perspective, in which the space where the action takes place is seen from above, this extending over the whole area of the representation, while the actors are seen from the side — compare the twofold spacial conception on the gems, below p. 83. The representation of the violently distorted body of the lion thus indicates the exact moment when the leaping beast clutches its prey.

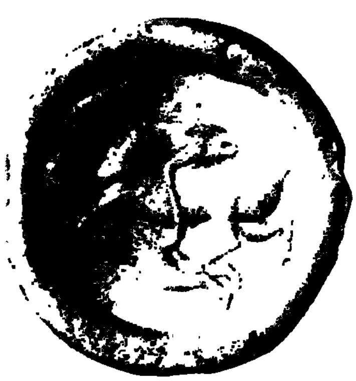


Fig. 52. Cast of sealstone (Finds No 16).

The find circumstances furnish a certain dating limit in this instance, not later than Late Helladic II.

17) 28 arrow-heads, perfect or almost so, and fragments of two others (Fig. 51); most of them were found under the bench in the chamber, a few of them come from the dromos. 21 are of obsidian, 6 of red and 1 of yellow flint [1]. L. 4.0—1.8 cm., br. resp. 1.4—0.8 cm. Most of them have a half-moon-shaped indentation at the base with the outer sides sharply curved, but a few of them have relatively long barbs, V-shaped indentation at the base and straight sides. Almost all are carefully worked, real masterpieces, surpassing the best examples I have hitherto seen. The points of some are still as sharp as a needle. When the sharp point is lacking, one, no doubt, has often to reckon with a resharpening after a breakage — analogous with the resharpening of the cutting edge of damaged stone axes.

---

[1] As to the material cf WACE, *Chamber Tombs*, p. 223.

KARO, *Schachtgräber von Mykenai*, p. 208, differentiates the arrow-heads of stone from shaft grave VI in Mycenae (Pl. CI) — the only one in which such have been found — into two types distinguished by their barbs, resembling either "Krebsscheren" or "Schwalbenschwänzen". He established the fact that obsidian is nearly always the material used for the former type (12: 2 Ex.) and flint for the latter (24: 2 Ex.) This must depend, however, on an accidental circumstance, for all our flint arrow-heads belong to the "Krebsscheren" type, while some of those of obsidian belong to the "Schwalbenschwanz" type. The variety "Olivenblattförmig", noted by Karo, is also represented in obsidian among our collection (the first and the last). KARO rightly emphasizes the Mycenaean character of the lithic arrow-heads — no influence from Crete is to be noted, where such arrow-heads are almost entirely lacking — and, furthermore, that the lithic arrow-heads hardly survive the period of the oldest bee-hive tombs (*ib.*, p. 351), that is Late Helladic I and II, which is confirmed by BLEGEN's observations from the Argive Heraeum, cf. *Prosymna*, pp. 254, 458 f.

Cf. also EVANS, *Palace of Minos*, IV, p. 838 ff., concerning the evolution of the arrow-head.

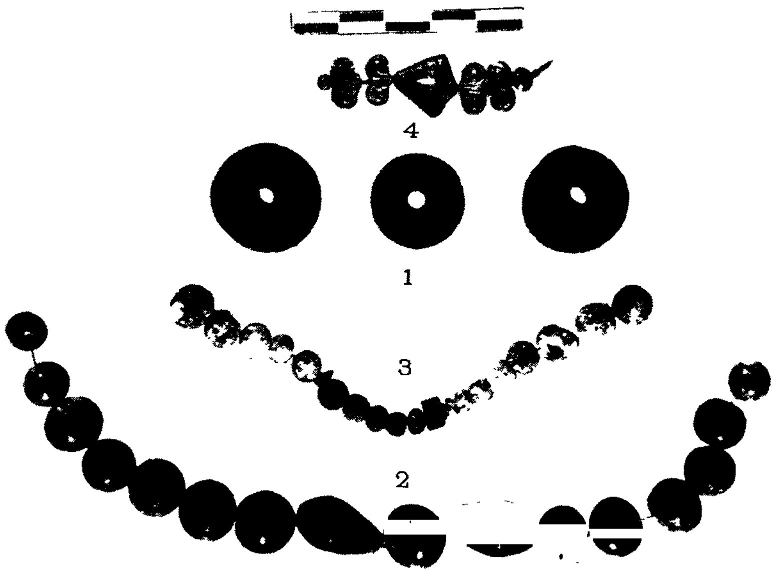


Fig. 53. Miscellaneous finds from tomb No 8
1) Steatite buttons (No. 18).
2) Amethyst beads (No. 19).
3) Beads of glass paste (No. 20).
4) Gold beads (No. 21).

18) Steatite buttons (Fig. 53: 1), 3 in number. One is bi-conical in shape with one of the cones truncated; h. 2.0 (1.5+0.5) cm., d. 2.3 cm.; black. The second is a simple cone, hollowed out at the string-hole on the broader side; h. 1.5 cm., d. 2.7 cm.; black. The third has a concave side and is smooth around the string-hole; h. 1.2 cm., d. 2.6 cm.; greenish.

Steatite buttons are met with only as late as Late Helladic III. For typology and dating cf. *Bull. Soc. R. d. Lettres de Lund*, 1924—25, p. 84; *Royal Tombs*, p. 60; WACE, *Chamber Tombs*, p. 218 f.; BLEGEN, *Prosymna*, pp. 256 f., 312 ff.

19) Amethyst beads (Fig. 53: 2), 16 in number, of which 9 were found in the chamber, 7 in the dromos. 14 round ones, 2 oblong ones, drop-shaped. The round ones: d. 1.4—0.8 cm., along the threading-hole 1.1—0.7 cm.; the drop-shaped ones: l. 2.0 cm., greatest d. 1.2 cm. The beads are probably of Egyptian origin, belonging to a well-known Middle Kingdom type; similar examples from the Temple Tomb at Knossos, EVANS, *Palace of Minos*, IV, p. 977 and Colour Pl. XXXIV. Cf. above p. 29.

20) Beads of glass paste (Fig. 53: 3). 20 of various shapes and sizes, a few of them found in the dromos filling, the others in the chamber. 18 are round or squatly round, d. 0.9—0.4 cm.; 1 thin disc bead, d. 0.5 cm.; 1 circular, crenelated disc bead, d. 0.7 cm., along the threading hole 0.1 cm.

21) Gold beads (Fig. 53: 4). 7 found in the chamber. 4 lily-shaped, like the eye of a 'hook and eye' with threefold threading-hole, br. 1.1 cm., l. along the threading-hole 0.6 cm.; 1 triangular, shield-shaped with triangular opening in the middle, likewise with three threading-holes, br. 1.1 cm., l. along threading-hole 1.1 cm.; 2 small, round ones, d. 0.5 cm., resp. 0.3 cm.

22) Some silver fragments and numerous bronze fragments, pieces of lead wire, remains of glass beads and of obsidian splinters. Mainly from the chamber, but part from the dromos fill.

Finds of lead wire in chamber tombs are frequent, cf. *Royal Tombs*, p. 90, fig. 62; *Asine*, p. 421; WACE, *Chamber Tombs*, p. 196; BLEGEN, *Prosymna*, p. 255. BLEGEN declares that its occurrence is "not susceptible of easy explanation"; he thinks that it was possibly used "in some way in sealing the tomb or a particular deposit in the tomb", but definite evidence of such sealing was not observed. He also thinks of the possibility that the leaden wire was used for "trussing the corpse of the dead into a particular posture for the funeral or for binding an arm or a leg into the place determined for it, or for holding the jaw in position". ZEHETMAIER, *Leichenverbrennung und Leichenbestattung*, p. 22, has advanced the theory that these strips of lead had served for binding the dead, an idea that in a certain measure may find support in the fact that a similar custom does exist in Greece in our time — cf. KERAMOPOULOS, *Ὁ Ἀποτυμπανισμός*, p. 52, foot-note 2. All such speculations, however, may now be disregarded, the true explanation being very simple. It is beyond doubt, thanks to close observations made in an as yet unpublished chamber tomb at Berbati-Prosymna, in which a quantity of lead wire was found, that it was used for dress-weights to improve the hang of the material and the artistic pleats — just as similar weights are sometimes used in ladies' garments at the present day.

* * *

The construction of the tomb permitted us, as shown above, to distinguish three periods in its history. Now we shall see how the finds may be referred to these periods.

It is not surprising if the thorough transformation which the tomb has undergone has obliterated all traces of the burial of the earliest period. But in view of the burial gifts from the interments of the second period and of the constructional conformity to tomb No. 6, we are certainly justified in referring the tomb in its original shape to Late Helladic I.

The remains of the dead person found in the wooden coffin belong to the second phase and in addition to the seal stone (No. 16) and the dagger (No. 9), found *in situ*, the helmet (No. 8) is certainly one of this person's possessions. It is also probable that the objects found under the stone bench, the wild boars' tusks helmet (No. 13), the razor (No. 10). the arrow-heads (No. 17), the whetstone (No. 15), and the Palace Style vase (No. 1), all dating to Late Helladic I—II, must be included among his belongings. Most of the other objects found in the tomb are to be dated to the same period, namely the three-handled jar (No. 2), the jug with bridged spout (No. 3), the bronze lamp (No. 12), the ivory mountings (No. 14), and the amethyst beads (No. 19). And there is no evidence that militates against our referring most of the glass beads (No. 20) and the gold beads (No. 21) to the same period.

The remainder of the finds, consisting of some relatively unimportant vases (Nos. 4—7), the bronze knife (No. 11) and the steatite buttons (No. 18), should be referred to the third period, the tomb chamber with the built-up stone bench. They belong to Late Helladic III.

Chamber Tomb No. 9.

The dromos, 15.75 m. long, slopes downwards towards the door of the chamber, first abruptly, then gently (Fig. 54). At the outer end it is 1 m. broad, at the inner end 2.15 m. Close by the stomion the dromos is 4.60 m. high. There was originally a blocking wall of stone at the inner end of the dromos in front of the stomion (Fig. 55). At a second burial the oldest blocking wall had been broken through down to a depth of about 1.15 m. from the floor level of the dromos. After this interment a new blocking wall was erected across the whole width of the dromos; it remains to a height of about 1 m., but since it was built at a greater distance from the door, this secondary blocking wall rests on the original earth filling in front of the older blocking wall, which is on a lower level. On top of the secondary blocking wall a packing of mixed earth and stone occurred and extended into the upper part of the stomion, which was badly damaged to a considerable height, no doubt by human hands as well as by running water. The different phases of the erection of the blocking wall could also be traced in the dromos fill. At the outer end of the dromos the filling was homogeneous, but the dromos had no rock wall for a length of $1\frac{1}{2}$ m., having been dug for this distance through the tightly packed earth, which formed the floor of a house from the Early Helladic period. In the wall of the dromos more than half of an Early Helladic bowl was found (Finds, No. 6). That the dromos really continued for a length of $4\frac{1}{2}$ m. through this Early Helladic stratum, is evident from the fact that the bottom of the dromos in the rock, not obliterated during the Early Helladic settlement, continues to rise evenly towards a strong blocking wall at the outer end of the dromos (Fig. 56).

When the tomb chamber was opened on the first occasion of a new interment digging was done only at 5 m. distance from the inner end of the dromos down to a depth of

3[illegible]3[illegible]9

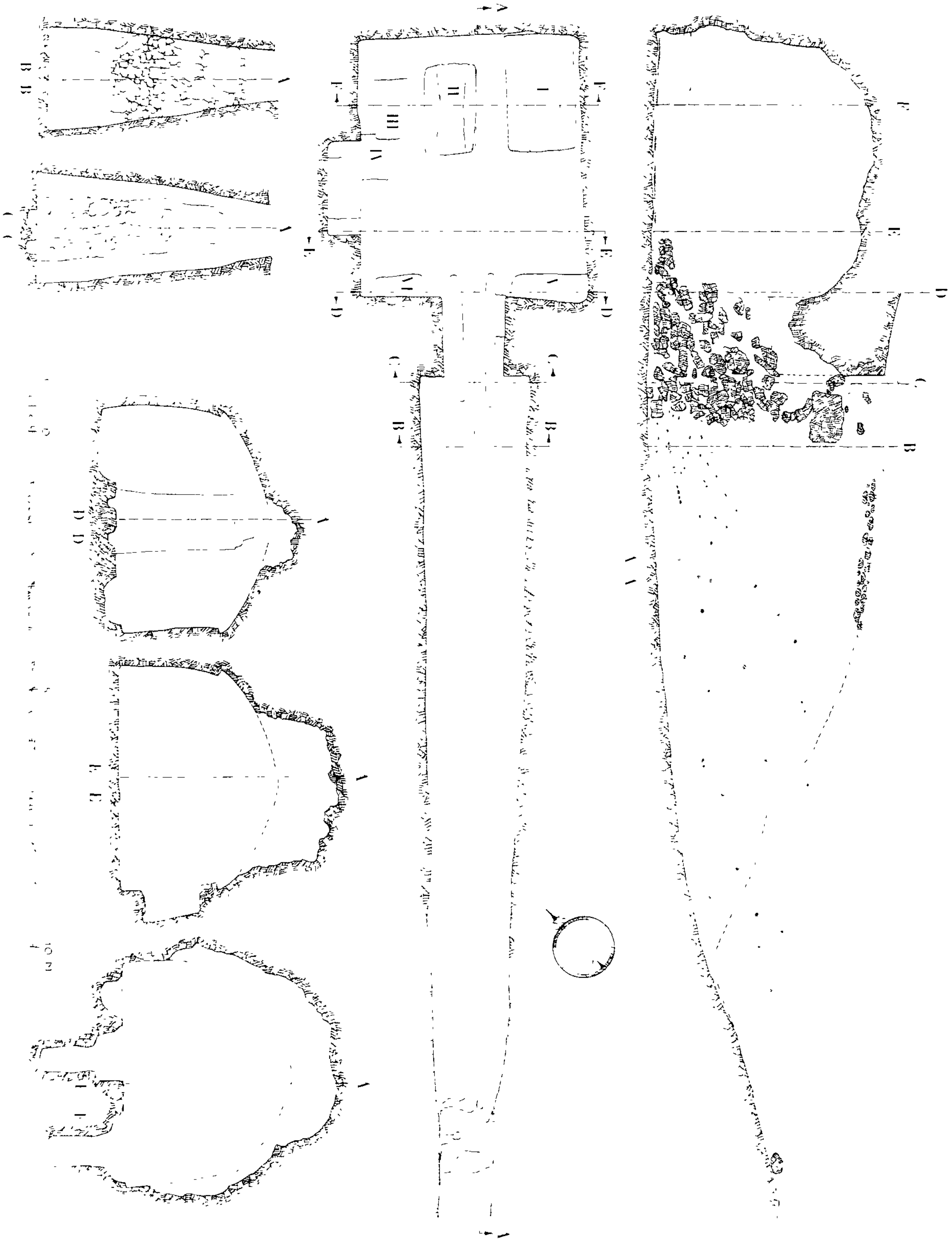


Fig 51 Plan and sections of chamber tomb No 9

1.15 m. from the bottom level of the original dromos, as layers of rain-filtered gravel clearly showed. After the burial a new blocking wall across the whole width of the dromos was erected on this level; the shorter dromos thus created was filled with earth, and stone paving was laid on a level with the upper edges of the rock to a depth of about 30 cm., the pavement extending over the whole width of the dromos for a length of about 5 m. from the stomion. Grave-robbers had later broken up this pavement nearest the stomion for a length of about 2 m. and forced a passage into the chamber. Their job successfully accomplished, they merely filled the hole with earth and stones. Immediately in front of the blocking wall, at a height of 25—30 cm. above the original dromos floor, there was a layer of ash and charcoal extending for a few metres out into the dromos; it obviously consists of the remains of a sacrifice made at the earliest sealing of the tomb.

Fig. 55. Blocking wall at the inner end of the dromos of chamber tomb No. 9.

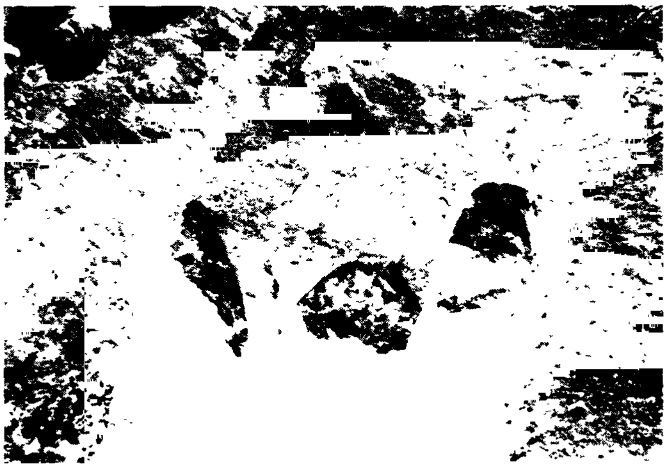


Fig. 56. Blocking wall at the outer end of the dromos.

The stomion has a depth of 1.58 m., a width of 1.15 m. and was originally 2.30 m. high (Fig. 57). Human agencies and seeping water have enlarged the opening on the outer side, but the original height may be observed on the flanking walls of the stomion. The original fill of the stomion remains to a height of about 1.30 m., above which the secondary door packing rests to a height of about 1 m. Owing to this fact the grave-robbers were able to gain access to the tomb only by passing over the original filling, at least in its outer part. — When the stone packing in the stomion was removed two grooves were revealed, about 20 cm. deep, extending through the stomion, for about 60 cm. into the dromos, and about 40 cm. into the chamber (Fig. 58). In the inner half of the stomion the right-hand groove widens into a small shaft close by the rock wall. In this shaft some skeletal material was found.

The chamber is roughly rectangular in plan, measuring 5 by 4.30 m. and was about 3.25 m. high under the ridge of the roof, 1.95 m. at the side walls. The roof of the chamber, like that over the door, had, to a very great extent, long since collapsed; the floor of the chamber was covered by fallen pieces of rock and seeped-in earth to a height of almost 2 m. When the chamber was emptied, a section of the débris showed that a collapse had

Fig. 57. Stone packing in the door.

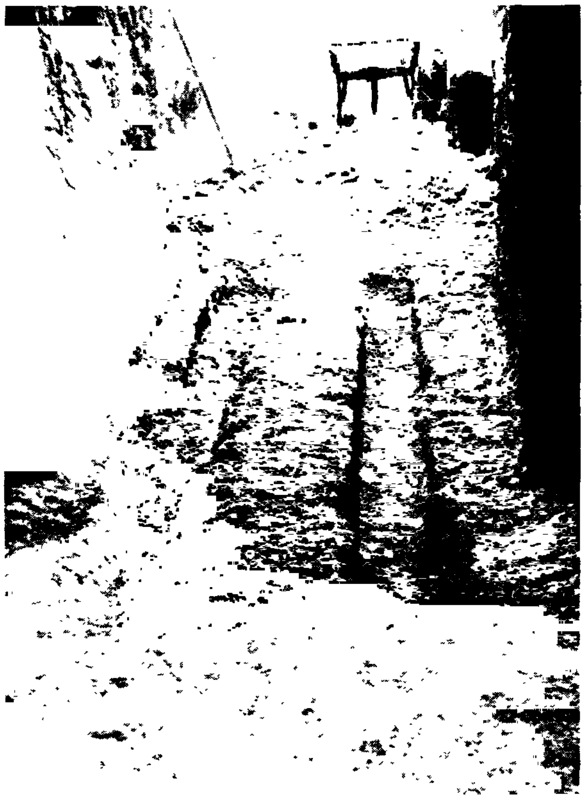


Fig. 58. Grooves through the stomion. The groove to the left widens into a small shaft.

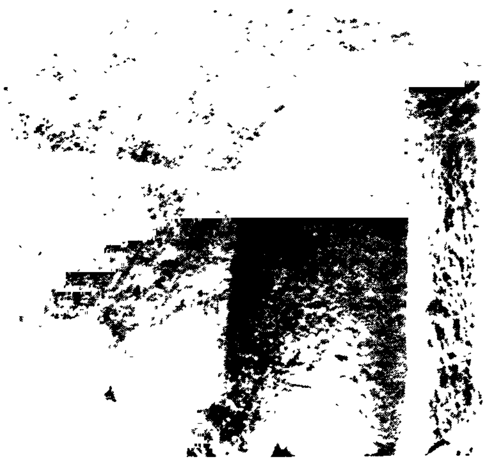


Fig. 59. Corner of the chamber in tomb No. 9 showing eaves and arched saddle roof

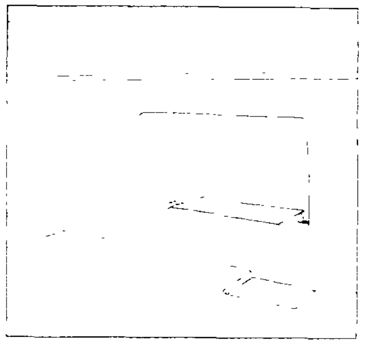


Fig. 60. Niche in the chamber of tomb No. 9

occurred on two occasions. In spite of this the original shape of the chamber could still be accurately reconstructed from the undamaged section in the vicinity of the stomion wall. The chamber may be compared to the negative of a house with strongly developed eaves and slightly arched saddle roof (Fig. 59). Its original shape may also be discerned from the inner wall of the chamber, where the original, well smoothed wall surface may be clearly distinguished from the surfaces that are roughened by the collapse.

There is a niche in the left-hand wall about 40 cm. above the floor level and 1.20 m. from the outer corner (Fig. 60). It is 1.85 m. long, 0.65 m. broad, and about 1.10 m. high. Shallow square sinkings about 10 cm. deep occurred in the two inner corners and bore a distinct resemblance to the sinkings for the blood in the freestanding slaughter table that was found in chamber tomb No. 2, the so-called Cenotaph, at Dendra. Cf. *Royal Tombs*, p. 100 and 109 f., Pl. XXIX.

No less than 6 shafts had been sunk in the floor of the chamber. Shaft I in the extreme right-hand corner measures 2.25 by 1.30 m. and is 1.15 m. deep. Ledges, 20—30 cm. wide, excavated to a depth of about 30 cm. below the floor level of the chamber, extended the whole length of the shaft and gave support to thick, flat cover-slabs with smaller stones as filling between them. At the outer end two of the large cover-slabs were still *in situ.*

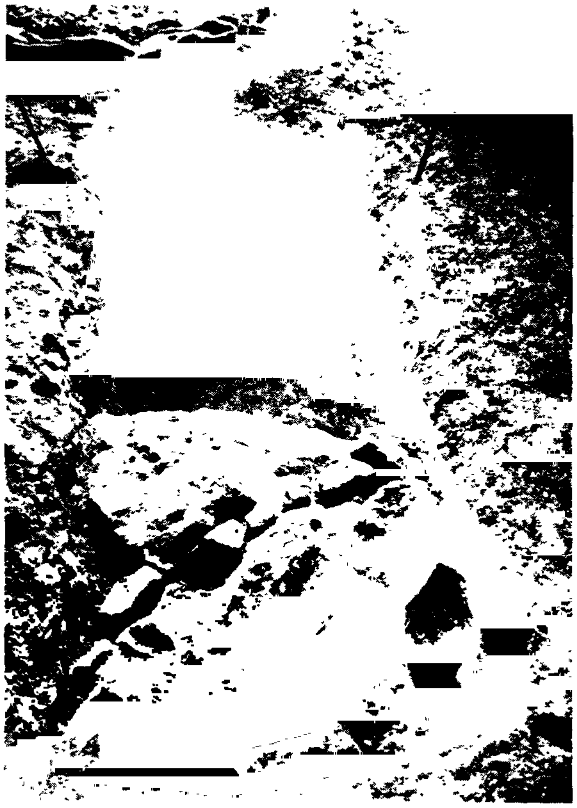


Fig. 61 Shaft II in the chamber of tomb No. 9.

The measurements of shaft II, in front of the dromos and approximately ½ m. from the rear wall of the chamber, were: a length of about 1.75 m., a breadth of almost 1 m., and a depth of 1.60 m. (Fig. 61). Similar ledges to those found in shaft I occurred, though they were somewhat deeper, extending to about 0.40 m. below the level of the chamber floor, and two large cover-slabs besides a filling of smaller stones were also found still lying in position at the outer end of the shaft. The deeper, narrower part of the shaft is in the shape of a double-axe, 45 cm. broad at the middle, widening towards both ends to a breadth of 55 cm. Cf. EVANS, *Tomb of the Double Axes*, in *Archaeologia* LXV, p. 33 ff., where the tomb shaft was similarly shaped, its outline resembling that of the sacred symbol; cover-slabs also rested on similar ledges.

Shaft III in the inner left corner of the chamber is about 1.15 m. long, 0.70 m. broad, and 0.45 m. deep. Its outer left corner intersects a smaller shaft, shaft IV, excavated in the floor at about the middle of the left-hand wall of the chamber, below the inner end of the niche. This shaft has a length of about 0.85 m., a breadth of 0.55 m. and a depth of about 0.50 m.

Shaft V, situated in the outer right corner, is about 1.50 m. long, 0.50 m. broad, and 0.35 m. deep.

Shaft VI, situated to the left of the door, is about 1 m. long, 0.40 m. broad and 0.25 m. deep.

Of these, shafts I and II are definitely, and III probably tomb shafts, while the shallower shafts, V and VI, are undoubtedly bone shafts; it would appear that shaft IV bears some relation to the sacrificial niche and should probably be considered as a large blood pit.

During the scraping of the dromos numerous sherds were found, mainly Late Helladic III of the ordinary type, except for a few pieces of a Late Helladic II Palace Style vase.

In the layer of charcoal and ash, traces of which occurred at the inner end of the dromos and extended through the door filling into the chamber, the upper part of a columnar lamp of steatite (Finds, No. 7) was found together with a small figure of glass paste (Finds, No. 8). Otherwise the chamber and all the shafts were almost wholly despoiled. In the earth that had been thrown down into the shafts, however, some sherds were found, but these were extremely fragmentary, of poor style, and in bad condition. The scanty remains of bones were also so badly preserved, that it was impossible to determine the number of skeletons.

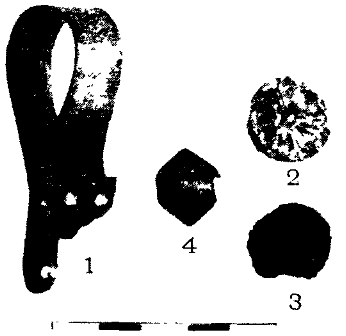


Fig 62. Finds from the dromos of chamber tomb No. 9

1) Handle of silver (No. 1)
2) Gold rosette (No 2).
3) Amber bead (No 3).
4) Bi-conical steatite button (No. 4).

Fig 63 Vases from chamber tomb No 9

1) Shallow bowl, E H III (No 6)
2) Stirrup vase (No. 9)

Finds.

In the dromos and from the black layer of charcoal and ash in front of the stomion.

1) Handle of silver (Fig. 62: 1). H. 6.6 cm., greatest preserved br. 3.0 cm. The handle had been fastened at the upper end by three tacks, their heads inside, the two outer ones

plated with silver, the intermediate, somewhat larger one with electron, and at the lower end by one tack, its head also inside and plated with electron.

2) Rosette of gold (Fig. 62: 2). D. 2.0 cm. Flower with eight petals; small holes for attachment at the outer edge.

3) Amber bead (Fig. 62: 3). D. 1.8 cm., along the string-hole 0.7 cm. Flattened spherical shape with small perforation.

For the use of amber cf. Nilsson, *Minoan-Mycenaean Religion*, p. 17 ff.; Wace, *Chamber Tombs*, p. 204 f.; Blegen, *Prosymna*, p. 286.

4) Bi-conical button of steatite (Fig. 62: 4). D. 1.8 cm., along string-hole 1.5 cm.

5) Some shapeless bronze and silver pieces and fragments of obsidian knives.

6) Shallow bowl (Fig. 63: 1). Early Helladic III; glassed ware. H. 7.0 cm., d. 13.0 cm. Low and open type. From a low ring-foot the straight wall rises obliquely outwards to the rim which has a slight inward curve. Red and black paint inside and out. Reddish clay. It was found in the earth wall, about 4 m. from the outer end of the dromos and consequently does not belong to the tomb inventory.

Fig. 64. Part of columnar lamp of steatite (No. 7).

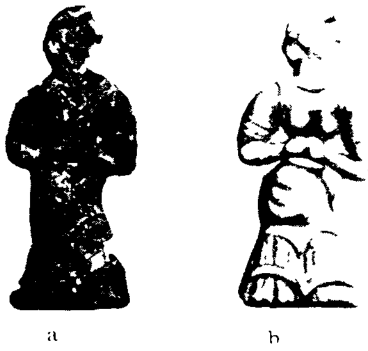


Fig. 65. Female figurine of faience (No. 8)
a) Photograph b) Drawing

From the chamber.

7) Upper part of columnar lamp of black steatite (Fig. 64); found among fallen stones inside the stomion. Preserved h. 22 cm., d. of the oil bowl 18 cm., of column 9 cm. Two wick channels; the oil bowl which has three cavettos on the outside, has a high ridge on the rim around the bowl-shaped cavity. Tongue-shaped projections form handles on the under side of the oil bowl between the wick channels. Around the stem two narrow, one broad, and, again, two narrow projecting rings.

8) Female figurine of faïence, flat at the back (Fig. 65 a—b); found in the layer of

ash and charcoal immediately inside the stomion. H. 4.0 cm., br. 1.8 cm. The female figurine is modelled 'en face', but, according to the artistic convention of the time, with the head and probably the feet in profile. For the attitude of the body cf. the Priest-King, EVANS, *Palace of Minos*, II, p. 779 f. She is represented standing with bent arms and the hands in front of the waist. She is dressed in a typically Cretan flounced skirt, which reaches to the feet, and in a bodice with short sleeves that leaves both breasts bare. A necklace is depicted. The back of the figure is flat, showing that it was applied to a level surface.

At Knossos four small female figurines of faience have been found, which closely resembles our figure. They are dressed in a flounced costume and the hands are laid in the exceptional position upon the breasts in the attitude of a Mother Goddess; their heads were missing, cf. EVANS, *Palace of Minos*, II, p. 702. Similar small faience figurines have also been found by TSOUNTAS in Mycenae, cf. *Ephemeris Archaiologiki* 1888, p. 165, Pl. VIII, 9, but these, like the two female figures of gold plate from shaft grave III in Mycenae, cf. KARO, *Schachtgräber*, p. 49, No. 36, Pl. XXVII[1], are represented entirely frontally. The gold figures from Mycenae, as well as those of faience, have holes at the back for fastening them to cloth or for suspending them by means of two threads. Our figure with the flat back was also of purely decorative use, and has probably been pasted to a smooth object (box ornament?).

9) Stirrup vase, reconstructed from fragments found in shaft II and on the floor of the chamber (Fig. 63: 2). H. 10.5 cm., d. 10.0 cm. Conical vase body with relatively broad and high ring at the base and flat shoulder. Foot painted. The body of the vase encircled by broad and narrow rings; in the handle zone groups of concentric curved and parallel wavy lines. A loop connects the bases of the false neck and spout. The handles are dotted. The top of the false neck bears a spiral. The spout is bordered with paint. Greyish-yellow clay; reddish-brown varnish.

⁂

This tomb with its sacrificial niche — which is most interesting from the architectural point of view — has evidently also been used for religious purposes and thereby affords new evidence of the cult of the dead. In this respect, together with the tomb shafts of double-axe-shape provided with ledges, it resembles the "Tomb of the Double Axes" at Isopata, dated to Late Minoan II. It is therefore to be regretted that so little of the original contents of the tomb remains. Not only this correspondence in the constructional details with the Isopata tomb, but also the find of the amber bead (No. 3) and of the sherds of a Palace Style vase in the dromos, affords sufficient data for referring the tomb to Late Helladic II, but it is certainly true, however, that it was still in use during Late Helladic III, as is evidenced by the stirrup vase (No. 9)[1].

---

[1] With these may be compared a small gold plate from Sardinia, undoubtedly of Mycenaean origin, now in the British Museum, cf. FURTWÄNGLER-LOESCHCKE, *Mykenische Vasen*, p. 48, fig. 27.

Chamber Tomb No. 10.

The dromos measures 19.45 m. in length, is 2.15 m. wide at the outer, and 2.55 m. at the inner end; its inner end lies 5.30 m. below the surface level of the rock (Figs. 66, 67). It slopes gently downwards to the stomion. The walls of the dromos are comparatively steeply inclined inwards, so that its width at the stomion is only 0.72 m. at the top, while it is 2.55 m. at the bottom (Fig. 68). At the outer end there is a carefully built wall, about 0.65 m. high and 0.75 m. broad (Fig. 69). At the inner end was a blocking wall, resting on a layer of earth about 0.30 m. deep and extending across the whole width of the dromos; it is about 1.65 m. high, built of smaller, carefully laid stones (Fig. 70). On top of this wall there was a layer of earth and gravel, about 0.70 m. thick, and on this another blocking wall of larger stones was superimposed, filling the dromos to the surface level of the rock. In front of this blocking wall a stone packing was found, which, decreasing in depth, extended for about 3 ½ m. out into the dromos (Fig. 71). Its surface formed an even pavement over the whole width of the dromos, and this part of the dromos was no doubt intentionally paved, cf. tomb No. 9, p. 53. It indicates that the tomb was opened, not by grave-robbers, however, after the burial, at least down to the level which in the blocking of the dromos is indicated by a layer of earth and gravel at a height of about 2 m. above the original bottom level of the dromos.

A quantity of pottery of early character was found in the dromos fill, mainly sherds of a large Palace Style vase (Finds, No. 3) and of a big, coarse storage vessel (Finds, No. 4). At a distance of about 3 m. from the stomion, on a level with the lower stone packing, a number of bronze fragments occurred obviously at the level to which the dromos was opened in connection with the construction of the secondary blocking wall.

The stomion has a depth of about 2 m., a width at the bottom of 1.60 m., slowly narrowing upwards, and a height of 3.30 m. It now shows a vaulted upper section, and to judge from its regularity the vaulting was intentional (Fig. 72). The stomion entirely lacked door-packing. In the earth filling, throughout which occasional large stones were interspersed, a whole series of layers of varying character could clearly be determined. The filling consisted of crumbled, yellowish rock to a height of about 1.20 m. above the floor; then followed a layer of charcoal, about 5 cm. thick, in which several sherds of the two large vases were found in addition to a number of ivory fragments and remains of animal bones. This deposit was covered by a layer of ash, about 25 cm. thick, and on top of this another, blacker layer of charcoal, 10 cm. thick, occurred. Above this level it was possible to distinguish a number of alternating layers, composed of fine, seeped-in

---

[1] The earliest examples of this vase-shape on the Mainland do not antedate Late Helladic III; cf WACE, *Chamber Tombs*, p. 169 ff., BLEGEN, *Prosymna*, p. 452

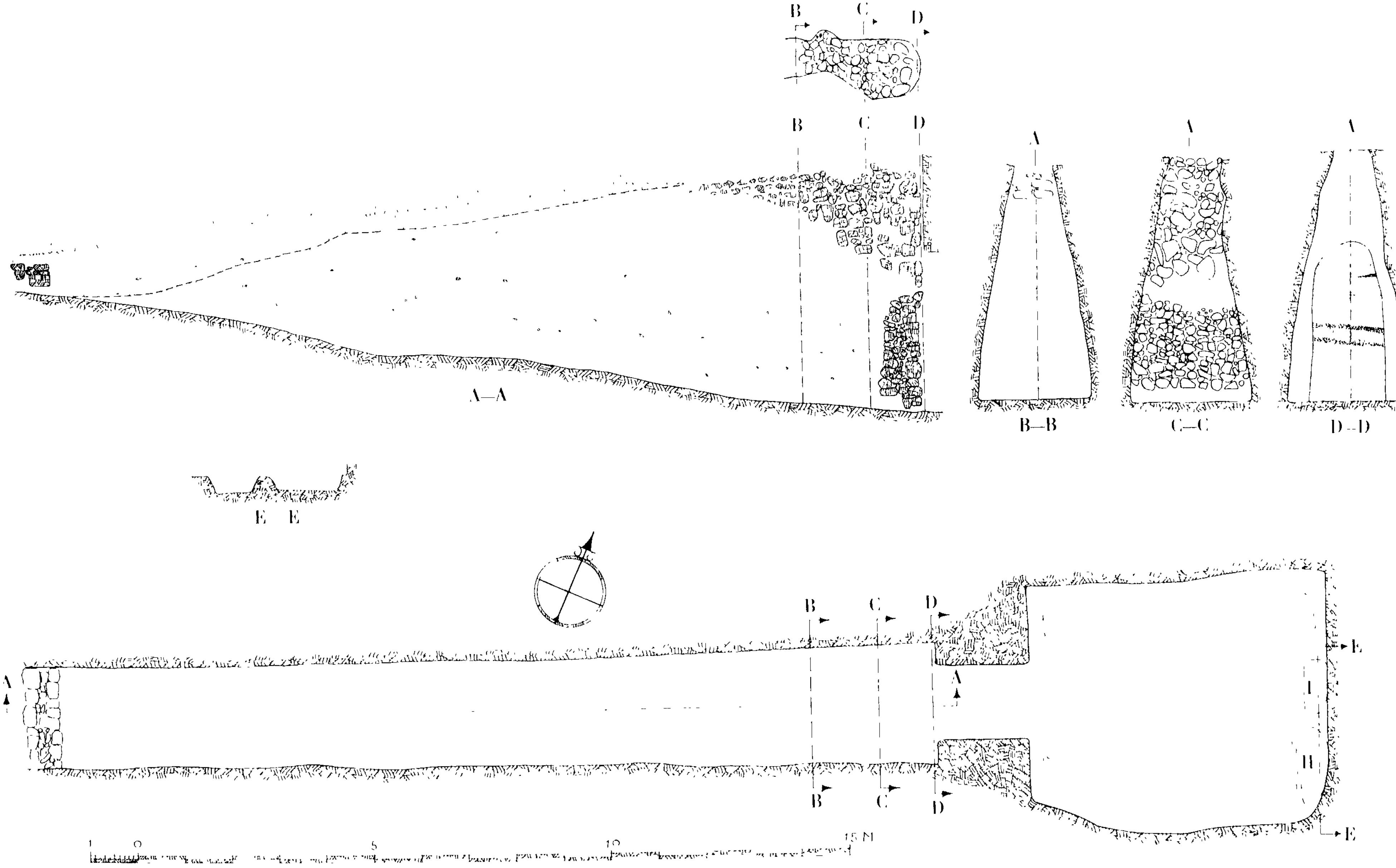


Fig. 66 Plan and sections of chamber tomb No. 10

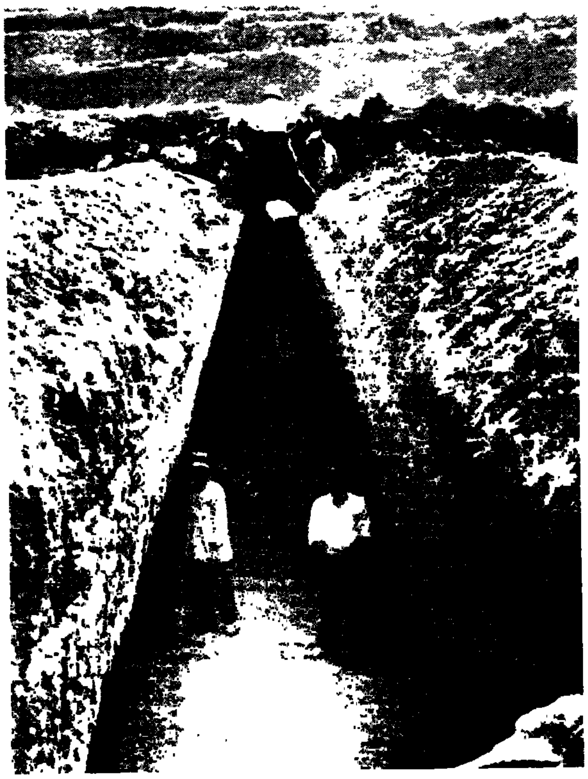


Fig. 67 Dromos of chamber tomb No. 10

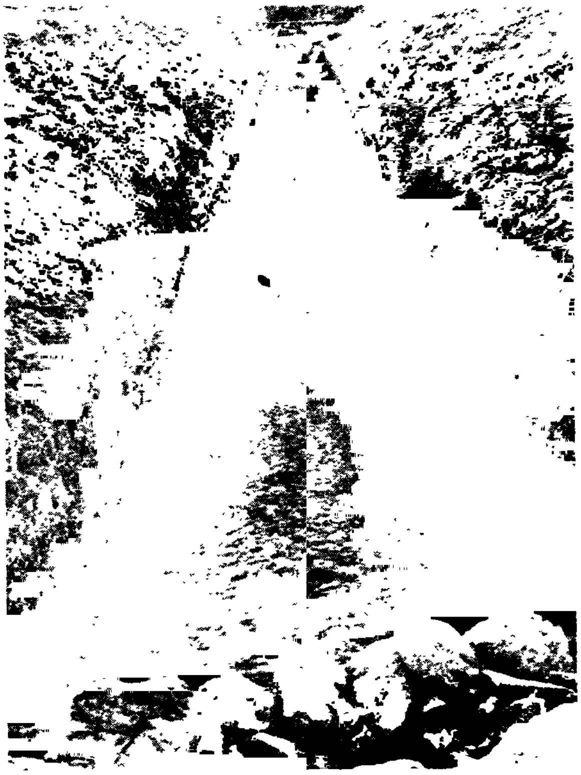


Fig. 68 Dromos of chamber tomb No. 10 with outer and inner blocking wall

Fig. 69 Outer blocking wall seen from the dromos

Fig. 70 Inner blocking wall

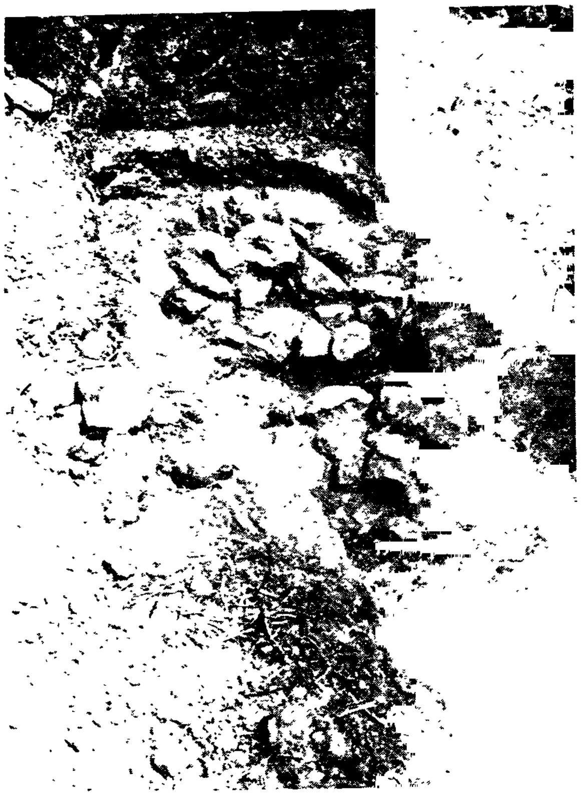


Fig. 71 Stone packing at the inner end of the dromos.

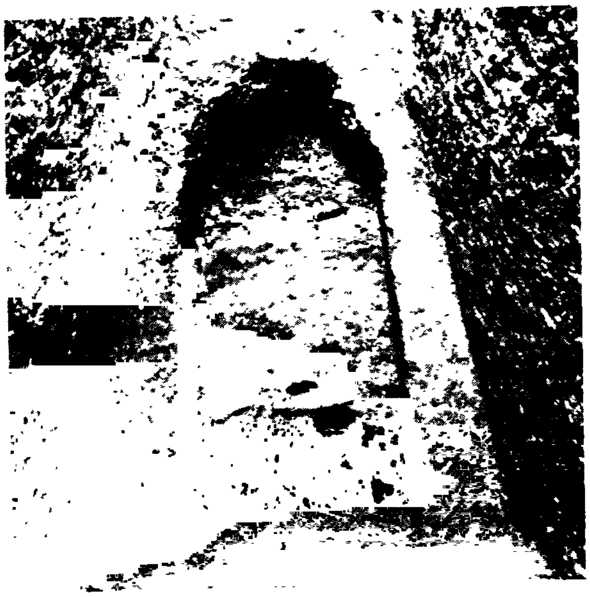


Fig. 72 Doorway of chamber tomb No. 10.

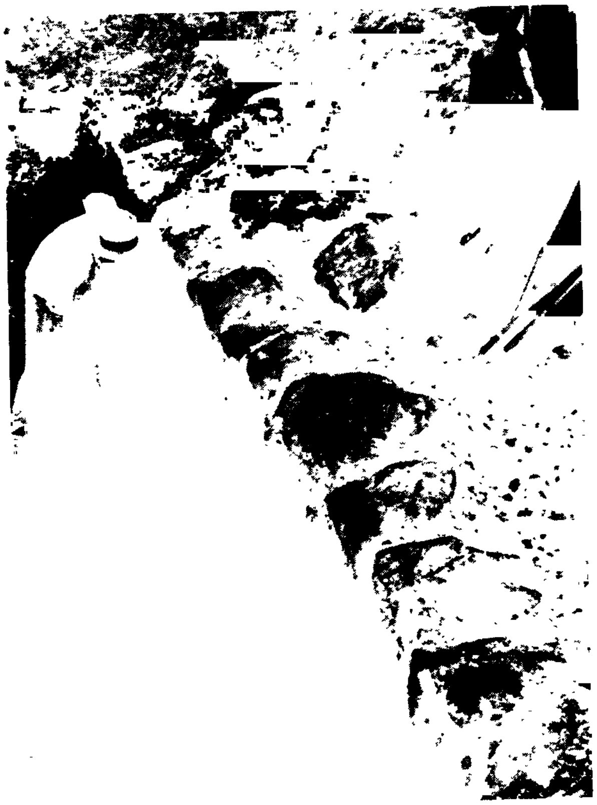


Fig. 73 Stone setting at the surface level of the rock above the chamber

Fig. 74 Clearing the chamber.

clay and of disintegrated rock respectively. This stratification had resulted from the collapse of the tomb chamber, a collapse which, however, did not occur on only one occasion, but successively, no doubt through the action of torrential rain-water. The same clear stratification could also be observed in the filling in the collapsed tomb chamber, and it is even possible to determine that the first collapse occurred to the right in the chamber.

The tomb chamber, which is roughly rectangular in shape, measures in length 6.35 m., in breadth about 5.25 m. The roof had completely caved in, and it was therefore impossible to ascertain the original height of the chamber. At the ground level of the rock large stones were set along the two long sides of the tomb and along its rear side (Fig. 73), forming a sort of enclosure around the tomb chamber, extending about 30—40 cm. beyond its circuit at the bottom level. It was impossible to determine whether such a wall existed at the top of the entrance side, completing the square, because here a modern terrace-wall had been erected, whose foundations penetrated to a lower level than the stone setting along the other sides. This stone setting, for which I know no exact counterpart — cf., however, the stone ring around the shaft graves at Mycenae — is probably to be explained by the fact that the tomb collapsed as early as the Mycenaean age, probably soon after it had come into use, and I am inclined to regard it, especially in view of the later construction of tombs in the same necropolis, as having been erected in order to demarcate the exact location of a large and magnificent tomb. Mycenaean together with a few Early Helladic sherds were found in the gaps between the stones. Sherds of the latter type also occurred in the earth filling in the chamber (Fig. 74). The occurrence of Early Helladic sherds is to be explained by the existence of a rather extensive Early-settlement in the area that was later occupied by the Mycenaean necropolis; cf. above p. 17 ff.

Two shafts were discovered near the rear wall of the chamber (Fig. 75). Shaft I, which had been used for burial purposes, has a length of approximately 1.20 m., a width of about 0.50 m., and a depth of about 0.40 m. Shaft II, which contained only burial gifts, is about 1.70 m. long, 0.65 m. broad, and 0.30 m. deep.

A layer of charcoal and ash occurred along the middlemost part of the rear wall of the chamber and extended a few metres out over the floor, and in this deposit a number of gold and glass beads was found.

Only one skeleton, badly preserved, was discovered in this tomb (in shaft I).

Finds.

In the dromos.

Several small bronze fragments and a number of obsidian flakes were recovered from the filling of the dromos, together with a small fragment of ivory and a fragment of steatite, on one side of which a number of indentations occurred. In addition, a number of sherds of a large Palace Style vase (Finds, No. 3) was found in the dromos, as well as of a big, coarse storage vessel (Finds, No. 4).

In the stomion.

1) Convex bronze button filled with lead; found at the bottom level of the stomion (Fig. 76: 1). H. 1.5 cm., d. 4.1 cm. It cannot be considered a weight, as the lead filling might lead one to suppose, because of a small severed rod on its lower surface.

2) Drop-shaped pendant bead of bluish stone; found in the stomion at a level of 90 cm. above the floor (Fig. 76: 2). L. 3.5 cm., br. 1.5 cm., th. 0.6 cm.

Several large fragments of the same vases, whose remains were found in the dromos, were also discovered in the stomion. They occurred in levels up to a height of 1.60 m. above the floor.

From the chamber.

3) Three-handled jar of Palace Style (Fig. 77). H. 70 cm., d. 52 cm. Piriform with almost straight sides and with comparatively high neck with broad rim, widening slightly upwards. A plastic ring around the base of the neck. Upon the shoulder three larger vertical handles and below each of them, on the body of the vase, two smaller ones. The large handles have a mid-rib. A torus on the foot disc.

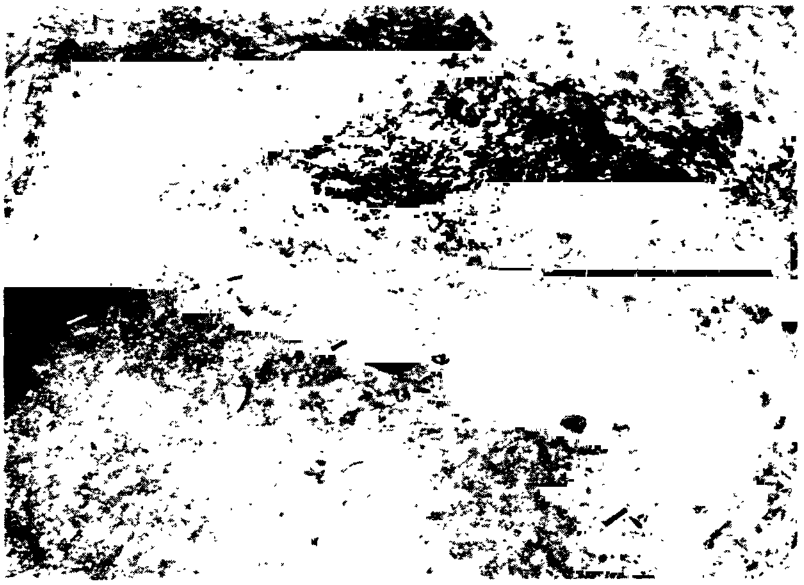


Fig. 75. Shafts in the chamber.

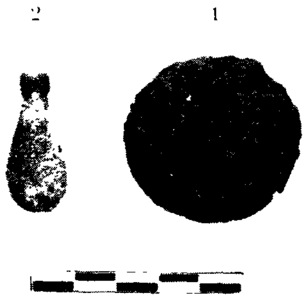


Fig. 76. Finds from the stomion
1) Bronze button filled with lead (No. 1).
2) Pendant bead of bluish stone (No. 2)

The base is completely painted. The body of the vase is divided into three vertical panels by broad continuous lines from the uppermost handle down to the base. Each of the three panels is filled with decorative motives. The lower part has a design which according to EVANS, *Palace of Minos*, II, p. 472, may be characterized as "bulbous plants linked together in a conventional manner", but which FURUMARK, *Aegean Decorative Art*, p. 59, rightly conceives as the terminating pattern of a spiral net, apparently supplanting spirals that could not be executed in complete pattern. He terms this the 'arcade pattern' — in this instance with double arches. Above this pattern there are four rows of large spirals, mutually coupled in each row, in the lowest row three, in each of the others four. In the eye of the spiral there are two smaller spirals, recalling ivy leaves, with triangular

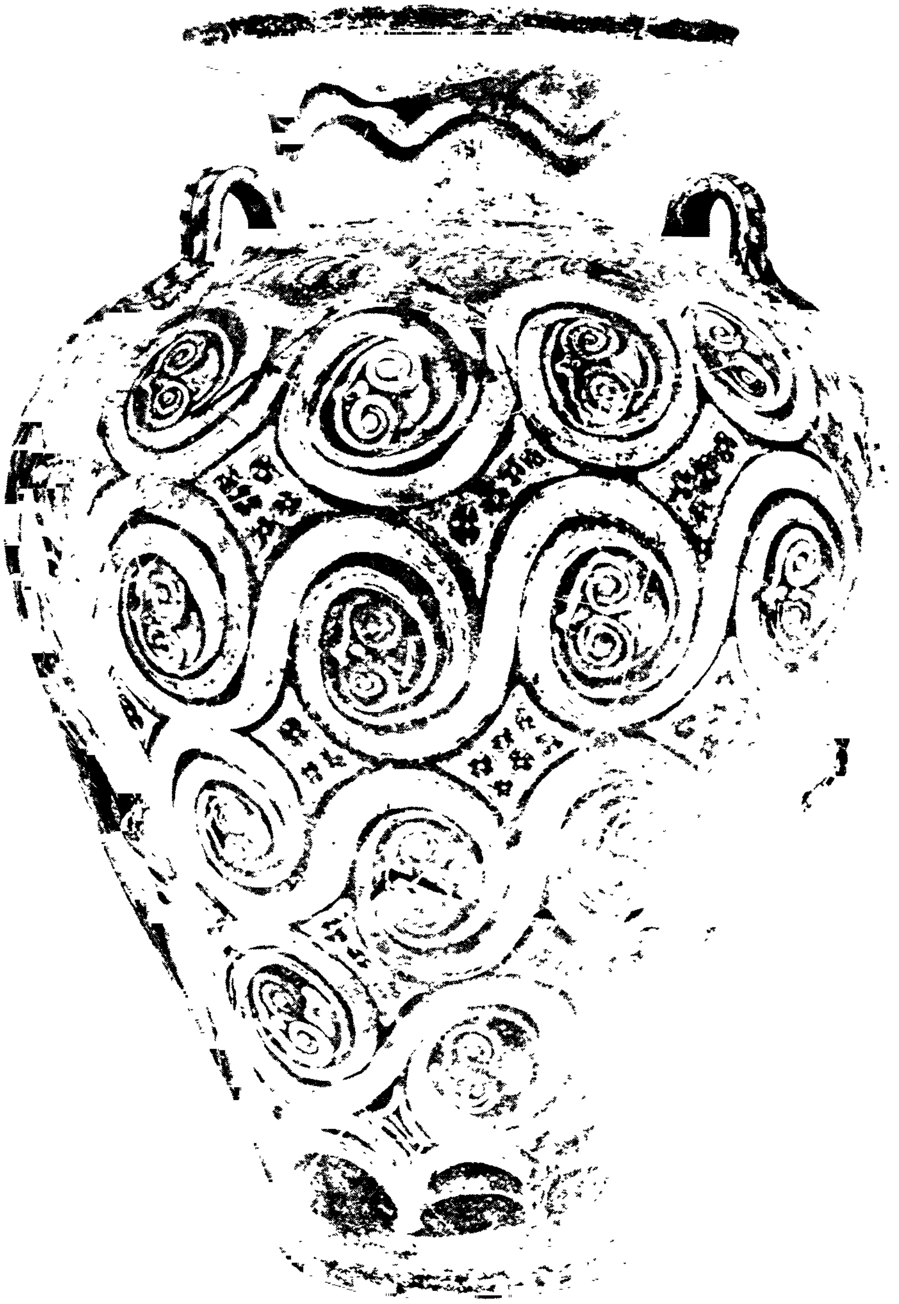


Fig 77 Three-handled jar of Palace Style (Finds No 3)

filling at the base. The interstices between the spirals arranged in rows are filled with irregular and inclined, four-sided figures with curved outlines, completely painted with the exception of small, reserved, flower-like ornaments executed in a 'reserved technique', corresponding to the red-figured technique of classical times. At the top of the shoulder in the handle zone a metalwork pattern occurs consisting of two rows of petals, like inverted commas in shape and in their arrangement, and a row of broad, short petals is placed closest to the neck. The plastic ring is painted as is the whole neck with the exception of two parallel reserved wavy lines in the middle. A similar wavy line is reserved on the mouth rim, otherwise painted. The handles are painted with chevrons, their points downwards. Yellowish ware; mainly black, in part reddish-brown varnish.

Only a few small fragments of this vase are missing. The sherds were scattered over the whole chamber, as well as in the stomion and the dromos; the bottom part and a comparatively great number of fragments were found immediately to the left inside the door.

A vase with the same decoration, 'arcade' pattern with spirals, found in the bee-hive tomb at Berbati, is a double of the vase just described, but has so far not been published (cf., however, *Illustrated London News* 1936, Feb. 15, p. 279). In Crete, too, spiral decoration plays an important rôle in the ornamentation of the Palace Style vases, cf. EVANS, *Palace of Minos*, IV, p. 339 f., and EVANS is no doubt wholly justified in associating it with the spiraliform motives employed in the renovation of the palace towards the close of Late Minoan I *a*: "The most constantly recurring decorative feature of this work of renovation was certainly the friezes consisting of finely drawn bands of running spirals enclosing rosettes in their central coils"; cf. also FURUMARK, *Aegean Decorative Art*, p. 54. However, as regards our vase, as also its pendant from Berbati, it is not a question of rosettes in the eye of the spiral, but of ivy leaf pattern.

The 'reserved technique' in which the pattern is reserved in the dark colour in the interstices between the rows of spirals suggests a Mainland origin. It is there met with especially on the neck or lips of vases of the Palace Style, cf. WACE, *Chamber Tombs*, p. 162 [1]. In Crete this technique is rarely used and is always in a subordinate position; cf., however, a painted goblet of Late Minoan I *b* date from Phaestos with shoulder zone decorated in this technique, EVANS, *Palace of Minos*, IV, p. 184, fig. 145 b.

I hope to have an opportunity in the near future of returning to the Palace Style of the Greek Mainland in connection with the publication of the magnificant vase finds from Berbati.

4) Three-handled jar (Fig. 78). Fragmentary. H. 66 cm., d. 52 cm. Piriform, somewhat squat shape with broad, high neck, surmounted by a broad rim. Three large, ribbed handles occur at the transition of the sharp, level shoulder and the body. A plastic rim runs below the mouth of the neck. The foot disc has a high torus. Red, coarse ware with strong intermixture of mica; undecorated.

The fragments were found in the chamber as well as in the stomion and the dromos. The base of this vase together with the majority of the fragments was found to the left inside the door.

---

[1] WACE sees a coral pattern in the reserved decoration, but even though it sometimes occurs in combination with other marine motives, the place of its application on necks and lips, where no other motives occur, and its usual combination with linear decoration speak egainst such an interpretation

In the inner left corner of the chamber.

5) Three-handled jar (Fig. 79). H. 38 cm., d. 32 cm. Piriform, with three ribbed handles on the shoulder. Low, relatively broad neck with broad mouth rim. A plastic ring around the base of the neck. Foot disc with large torus. The foot and the lower part of the body completely painted, with 6 narrow rings above in a reserved broad band, followed

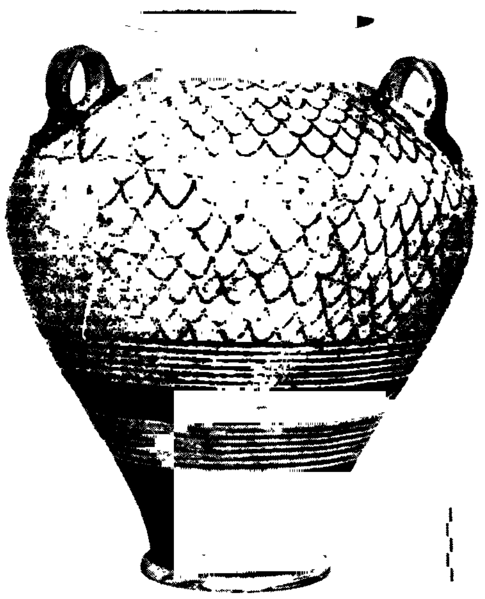


Fig 79. Three-handled jar (No. 5).

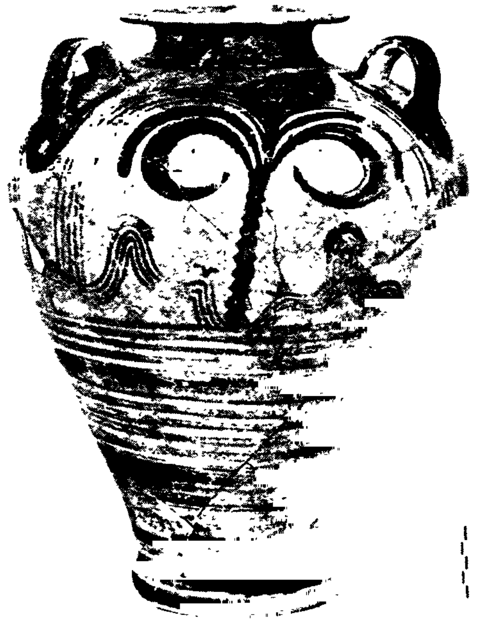


Fig. 80. Three-handled jar (No. 6).

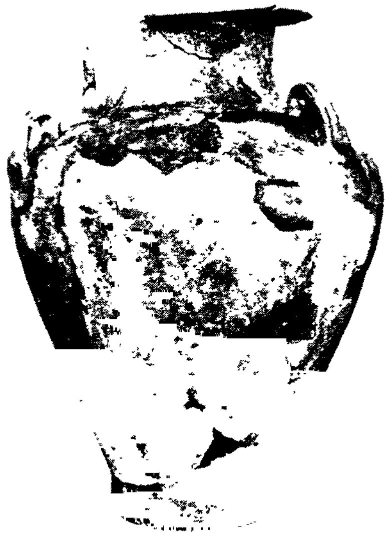


Fig 78 Three-handled jar (No 4)

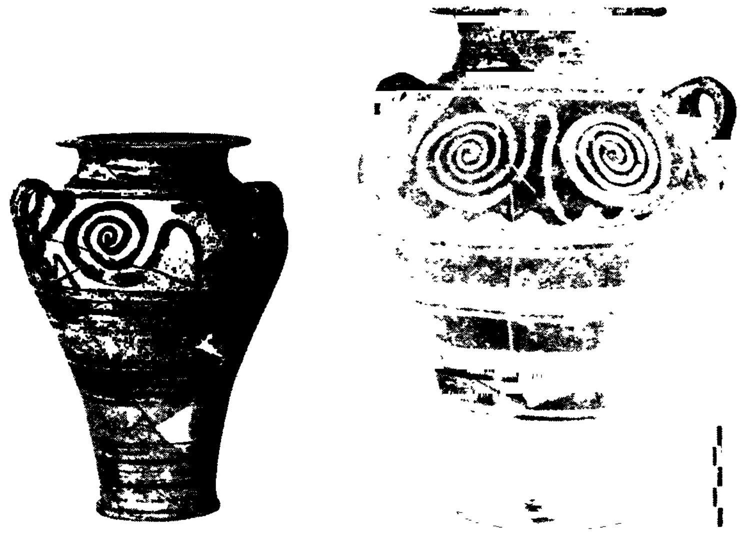

2 1

Fig. 81. Three-handled jars (Nos 7—8)

by a broad painted band, and then, again, 6 narrow rings. The upper part of the body and the shoulder zone are entirely covered by the scale pattern or 'tricurved arch net' with the arches curving downwards. Handles and neck completely painted. The handles are encircled by a broad, continuous line. A reserved zone with 'Laufender Hund' or S-ornament on the rim. The ware is yellowish-green, with black varnish.

For the scale pattern or the tricurved arch net cf. especially Furumark, *Aegean Decorative Art*, p. 45. The pattern is well established on the Greek Mainland, increasing in popularity during Late Helladic II, but does not become common till Late Helladic III, cf. Wace, *Chamber Tombs*, p. 159, "Net Design". As to our vase, cf. Wace, *ib.*, p. 57, No. 1, Pl. XXVIII, dated to Late Helladic II.

6) Three-handled jar (Fig. 80). H. 40 cm., d. 30 cm. Piriform with flattened shoulder and low and relatively narrow neck with broad rim. Plastic ring below the neck. Three large ribbed handles on the shoulder. Relatively large foot disc with torus. The foot and the lower part of the body completely painted, then 4 narrow rings in a broad reserved zone, followed by a broad, painted band, above which, again, 4 narrow rings occur. On the shoulder and the upper part of the body between the handles a somewhat obliquely set palm motif is depicted — a palm with curling leaves and with curious grass-like excrescences on either side of the upper part of the palm-tree, here extended unusually far down, to the band from which the rough stem rises[1]. At the base the palm is flanked on either side by decorative motives, each consisting of 4 parallel, tricurved arches, the two lateral being crowned by angle-like figures, above the centre apex a thick curved line. The handles, completely painted on the outside, are encircled by a broad, continuous line. The neck is entirely painted; the rim has 'Kommaverzierung'. Greenish-grey ware; black and in part brownish varnish.

A double to this vase came from tomb 518 in Mycenae, cf. Wace, *Chamber Tombs*, p. 80, No. 15, colour Pl. V. The palms are identical. The motive, which has been discussed by Evans, *Palace of Minos*, II, p. 493 ff., can be traced back to Middle Minoan II in Crete, but it does not occur on the Mainland before Late Helladic II, cf. Wace, *Chamber Tombs*, p. 161. The complementary ornament on the vase from Mycenae consists of only three parallel crooked lines, 'quirks'. This ornament is met with during Late Helladic II, especially on vases of the Palace Style, cf. Wace, *ib.*, p. 160. I am inclined to consider it as a variant of the representation of the rocky ground depicted, above all, on alabastra, cf. f. inst. Finds, Nos. 9, 10, 12 below and especially Blegen, *Prosymna*, colour Pl. VI, No. 376. Cf. also below, p. 41.

7) Three-handled jar (Fig. 81:1). H. 25.2 cm., d. 18,0 cm. Piriform with strongly slanting shoulder and incurving body towards the base. Three vertical ribbed handles. Low and broad neck with relatively broad rim. Flat foot with torus. The foot and the lowest part of the body are completely painted; the middle part of the body is encircled by broad and narrow lines. The broad shoulder zone is bordered on the upper part of the body

---

[1] Evans, *Palace of Minos*, II, p. 495 f., has no doubt explained them correctly as originally denoting the inflorescence, that characterizes the date-palm.

by a broad line, wavy at the top, from which two spirals attached to a high loop rise between each pair of handles. At the top the handle zone is bordered by a narrow line. The neck and the handles, encircled by a band, are painted. The broad mouth rim has a reserved wavy line, the rest is painted. Yellow ware; reddish-brown varnish. — Cf. the following.

8) Three-handled jar (Fig. 81: 2). H. 18.5 cm., d. 13.5 cm. Form as in No. 7. The foot and the lower part of the body entirely painted. The middle part of the body encircled by broad and narrow zones. In the handle zone between each pair of handles a large spiral with a smaller one at each side, the spirals rising by a loop from the uppermost girding band. The handle zone is bordered at the top by a narrow band. The neck and the handles, encircled by a band, are painted. The rim is dotted. Yellow clay; reddish-brown varnish.

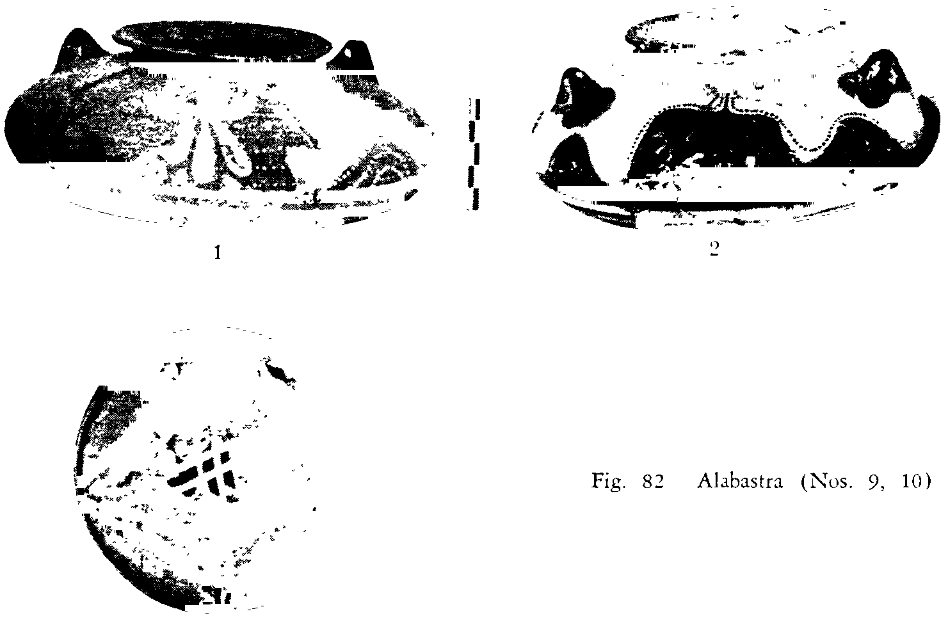


Fig. 82 Alabastra (Nos. 9, 10)

The jar corresponds exactly to the preceding one, as regards form as well as clay and technical execution — they must certainly have originated in the same workshop. A very similar, more slender vase was found in tomb 36 in the Argive Heraeum, cf. BLEGEN, *Prosymna*, Fig. 260, No. 624.

9) Alabastron (Fig. 82: 1). H. 7.2 cm., d. 20.0 cm. Flattened form. The bottom is decorated by a four-sided figure of double curved lines, inside which two pairs of similar lines diagonally crosse each other, 'the wavy cross pattern'. Two circles at the edge. From the upper circle and between the handles hills rise in wavy contour and a thin central promontory extends upwards to the neck ring. Inside the hills is a reserved space with three dotted curve lines. Decorative elements, consisting of 'pendant crocus', are present below each of the completely painted handles. The whole body of the vase, between the ornaments just mentioned, is filled with small dots arranged fairly regularly

in horizontal rows — 'bead festoons' — 10—12 in number. The neck is wholly painted inside and out. Yellowish clay; brown varnish.

WACE and BLEGEN, *Pottery as Evidence for Trade and Colonisation in the Aegean Bronze Age*, in *Klio* 32 (1939), p. 131 ff., prove conclusively that the low alabastron is a characteristic Helladic shape. — The wavy cross pattern on the base is known in Boeotia on vases found at Thebes and is also met with on six of the eleven alabastra that have been found in different places in Egypt. WACE and BLEGEN have therefore expressed the supposition that the examples found in Egypt are of Boeotian manufacture, which seems to me, however, rather uncertain in view of our specimen that is certainly of genuinely Argive origin.

Both the pendant crocus and the bead festoons were adopted in vase painting in Crete during Late Minoan I *b*, cf. EVANS, *Palace of Minos*, IV, p. 284 ff. As to the bead festoons cf. BLEGEN, *Prosymna*, p. 405, colour Pl. VI, no. 376, on an alabastron, dated by him to Late Helladic I. Our specimen cannot be later than Late Helladic II.

10) Alabastron (Fig. 82: 2). H. 7.7 cm., d. 18.0 cm. On the flat bottom a 'wheel' pattern occurs with five pairs of curved spokes radiating from two concentric circles with two concentric circles at the outer edge. On the lower part of the shoulder a wavy pattern, "the switch-back", occurs with more accentuated crests in each space between the handles. A large round disc occurs above these promontories, though connected to them by a thin line. A dotted line follows the outer contour of the decoration. A broad ring below the rim. Neck and handles painted. Yellow clay; black-brown varnish.

From the inner right corner of the chamber.

11) Three-handled jar (Fig. 83). H. 44 cm., d. 35,5 cm. Piriform with relatively high and narrow neck widening upwards, with a plastic ring at the base of the neck and comparatively narrow base with strongly emphasized disc-foot. Three ribbed, high-set handles. The foot and the lowest part of the body completely painted, then encircled by narrow and broad rings, first 5 narrow ones, then a broad one, then 5 narrow ones, a broad one and a narrow one forming a border at the top. The shoulder zone and the upper part of the body are wholly covered with scale pattern or 'tricurved arch net', bordered at the top by a narrow ring. The handles, entirely painted, are encircled by a broad band; they are perforated at the top as well as at the bottom in order to ensure better firing. The neck is entirely painted, as is also the rim, which has, however, a reserved zone with a wavy line. Reddish clay; brownish-red varnish. — Comp. above No. 5.

12) Alabastron (Fig. 84). H. 11.5 cm., d. 29.0 cm. Comparatively high form. A 'wheel' on the base, with "switch-back pattern" in the main zone, as on No. 10, but with more numerous crests. Double rows of dots on both sides of the disc-shaped pattern. A narrow ring around the neck. Handle and neck completely painted. Yellowish-red clay; deep black varnish.

13) Shallow cup with one high loop ribbon handle (Fig. 85: 1). H. 6.2 cm., inclusive

of the handle 11.5 cm., d. 18.5 cm. Convex side with flaring rim. The base is slightly concave underneath. Externally decorated at the base with two rings, in the main zone with small ivy leaves with very elongated point and double, crooked leaf-stalks. The rim and the handles painted. The surface is very worn and the cup has become warped in the firing. Yellowish clay; reddish-brown varnish.

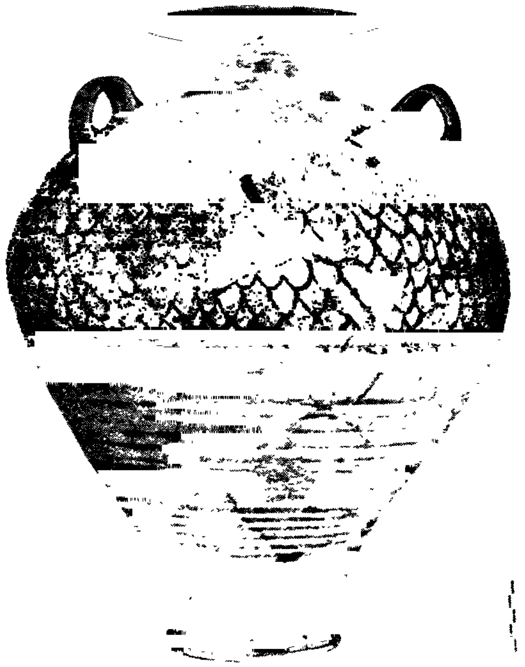


Fig. 83 Three-handled jar (No. 11).

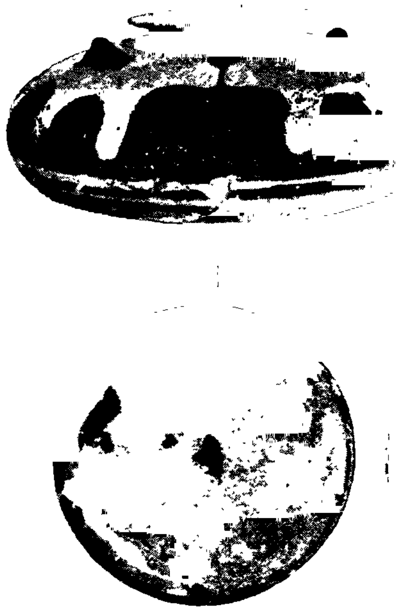


Fig 84. Alabastron (No. 12)

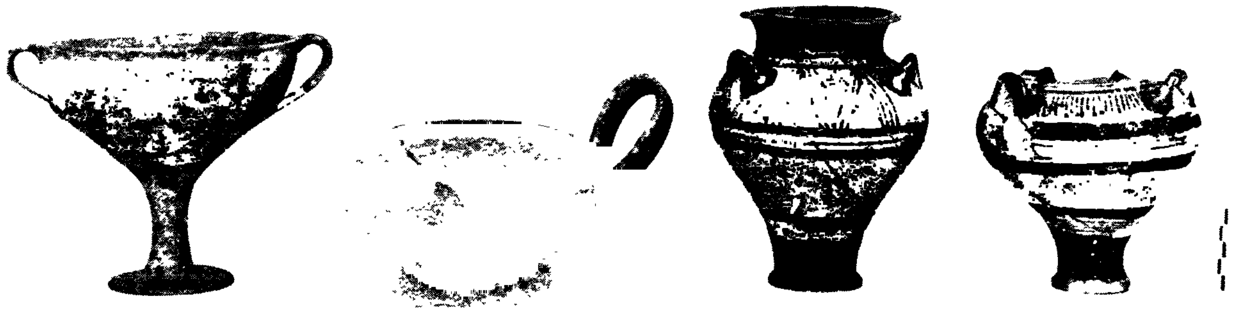


Fig 85 Vases from chamber tomb No 10.

1) Shallow cup (No. 13).
2) Stemmed goblet (No. 14)
3) Three-handled jar (No. 15).
4) Three-handled jar (No. 16).

This shape with semi-naturalistic decoration is common in Late Helladic II, cf. BLEGEN, *Prosymna*, p. 412 f.

14) Stemmed goblet (Fig. 85: 2). H. 14.5 cm., d. 16 cm. The whole side curved with

flaring rim and two low handles springing horizontally from the rim; slender, but relatively low stem; disc-foot. Yellow clay; undecorated.

The form indicates beginning of Late Helladic III. For the different sub-varieties cf. BLEGEN, *Prosymna*, p. 432 ff.

From the floor of the chamber without definite position.

15) Three-handled jar (Fig. 85: 3). H. 16.5 cm., d. 13.5 cm. Three small horizontal loop-handles on the shoulder. Piriform with concave profile towards the relatively large projecting foot-disc; low, broad mouth. The foot and the lower part of the body painted. Around the middle of the body three rings. In the handle zone, which is bordered by a ring at the top, a pattern consisting of triple or quadruple angles with double curved lines inside. The handles and neck are painted; on the rim a reserved band. Yellowish clay; brown varnish.

This shape is very popular in Late Helladic III. The form, resembling that of the Palace Style vases, indicates a date at the beginning of that period.

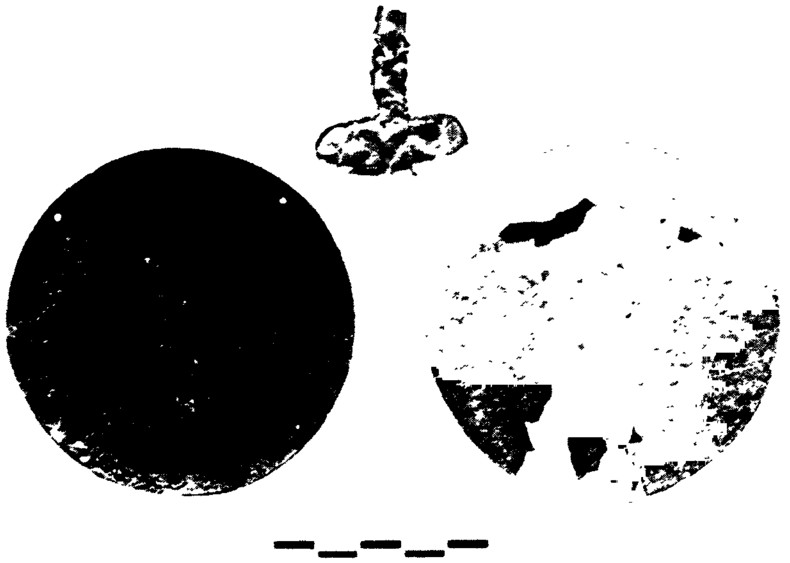


Fig 86 Scale pans of bronze and gold mounting (No. 18)

16) Three-handled jar (Fig. 85: 4). Neck and part of shoulder zone are missing. Preserved h. 13.2 cm., d. 13.2 cm. Three small, horizontal loop-handles on the shoulder. Wide and round body with strong in-curving of the lower part. Relatively high foot-disc. The foot and the lower part of the body completely painted. The rest of the body decorated with narrow and broad rings. In the handle zone, which is bordered by two narrow rings at the top, parallel vertical strokes. The handles entirely painted. Yellowish clay; brown varnish.

For shape and decoration cf. WACE, *Chamber Tombs*, Pl. XLIV, tomb 519, No. 2; Pl. XLV, tomb 525, No. 7.

17) Ewer with two lateral handles. Fragmentary. H. 15.5 cm., d. 10.5 cm. Piriform with concave profile towards the base. Plastic ring at the base of the neck. The foot and the lower part of the body entirely painted. The rest of the body encircled by narrow and broad rings. On the shoulder a zone with short wavy lines, 'Laufender Hund', then a narrow ring. Neck, handle, and spout are painted. Yellow clay; reddish-brown varnish.

WACE, *Chamber Tombs*, p. 168 f., calls this vase type "jug with stirrup handle" and distinguishes two different classes, which, however, have hardly any features in common. Our vase should belong to his second class, which, in my opinion, is a hybrid between the Cretan jar with pinched mouth and the stirrup vase.

For the shape cf. also BLEGEN, *Prosymna*, p. 440.

Bronze.

18) Two scale pans of thin bronze-plate (Fig. 86). D. 8 cm. The rims are turned up, giving a slightly concave shape; four regularly spaced suspension holes near the rim. A T-shaped gold-plate, l. 1.5 cm., br. 3.5 cm., was found together with the scale pans. The gold-plate, as the turned-up rims show, projected vertically from the cross-beam of the balance, presumably made of wood.

Scale pans are frequently found in Late Helladic tombs, throughout the period, cf. list in KARO, *Schachtgräber*, p. 247, note 1, to which the following must be added: WACE, *Chamber Tombs*, p. 58, No. 20; finds in five of the chamber tombs in the Argive Heraeum, BLEGEN, *Prosymna*, p. 351 f., and FORSDYKE, *The Mavro Spelio Cemetery at Knossos*, in *BSA*, XXVIII, p. 253, III, 8. From the last-mentioned tomb come fragments also of the scale-arm and the scale-handle, like a miniature sword-hilt, both of bronze. These scales, like the one found in our tomb, were probably intended as a rule for ordinary use, as is often indicated by weights found together with the scale pans. The scales of thin gold leaf from the Third Shaft Grave at Mycenae, however, appear to have served quite a different purpose, concerning which KARO, *op. cit.*, p. 247, says: "Alle drei sind bloss fürs Grab gemacht, für jeden praktischen Gebrauch viel zu dünn und zerbrechlich". In view of the connection between Egyptian and Mycenaean burial customs, which is touched upon below, I entirely agree with the opinion expressed by EVANS, *Palace of Minos*, III, p. 151, that these fragile scales are "an allusion to the weighing of souls, suggesting an analogy with the Egyptian idea of Thoth and Anubis weighing the heart of the dead man against the feather of Truth".

The frequent occurrence of scales for ordinary use in Late Helladic graves, representing the household of the dead in its economic aspect, seems to militate against NILSSON's interpretation of a figure with scales as Zeus with the scales of destiny, cf. NILSSON, *Zeus mit der Schicksalswage auf einer cyprisch-mykenischen Vase*, in *Bulletin de la Société royale des Lettres de Lund* 1932 33, p. 29 ff. With EVANS, *Palace of Minos*, IV, p. 659, I am more inclined to interpret the representation as an allusion to everyday conditions in spite of the objections raised by NILSSON in his paper, *Mycenaean and Homeric Religion* in *Archiv für Religionswissenschaft* XXXIII, p. 90 f., and WÜST, *ib.* XXXVI, p. 167 f.

The type of scale here in question may be traced back in Egypt to the time of the Old Kingdom as an Egyptian hieroglyph, and it was undoubtedly transplanted from there to Crete, where the "Balance" sign occurs in Linear Script *A* as well as *B*. The sign ⊢ with the phonetic value *ta* in Cypriote syllabic writing I interpret as the cross-beam of a scale

⊤ — *τάλαντον*. thus a scale shown in an abbreviated, schematic form and, to save space, turned through 90°.

Shaft I.

When the layer of charcoal and ash along the rear wall of the chamber was scraped off a shaft came to light, which was completely filled with the same mixture of charcoal and ash containing gold and glass beads, scattered throughout. At the bottom of the shaft the very decomposed remains of a skeleton were found, orientated with the head to the west. Of all the finds that were made in this shaft (Pl. III) only the gold cup had definitely been placed there (Fig. 87); all the other objects seemed to have been swept down when the shaft was filled with the remnants of charcoal and ash from a pyre on the floor of the chamber.

Fig. 87. Shaft I during excavation.

19) Gold cup (Fig. 88; Pl. IV: 1—2). H. 5 cm., inclusive of the handle 7.5 cm., d. 13 cm., inclusive of the handle 15 cm. Weight 98 gr. The cup is beaten out from a piece of pure gold sheet (fine gold). The base has been worked over a die with a small central boss and with a plastic circle half way between the centre and the outer edge (Pl. IV: 2), an arrangement that no doubt served to fix the centre while the cup was beaten into shape and thus ensured an absolutely regular form; cf. another arrangement for the octopus cup, *Royal Tombs*, p. 31. The rim is worked in eight lobes. Above the sharp edge a round ribbed rim is attached. The high loop-handle of somewhat thicker gold-sheet is provided with edge- and mid-ribs which are segmented in the same manner as the rim. The handle tapers downwards and is riveted from the inside by means of three goldstuds with rounded heads (two at the top, one at the bottom). The lower end of the handle is in the shape of two transverse plates, to which a narrower, double papyrus capital is joined, the whole in the form of a column if the handle is straightened out (cf. below p. 142). It is so attached that a

part of the decoration is concealed. Between a smooth belt on the base and another below the rim there is a zone bordered at the bottom and at the top by cross-ribbed bands with a decoration consisting of extremely conventionalized ivy leaves with the point of one fitting into the base of the next. Exactly the same ornamentation is to be found on a silver cup from chamber tomb No. 2, the 'Cenotaph', cf. *Royal Tombs,* p. 99 f., and on the rim of a spreading open bowl of bronze from the same grave, cf. *ib.*, p. 92.

'Sacral ivy' in continuous pattern, in which S-scrolls are combined with the recurved upper outline of the papyrus tuft, is met with in Crete during Late Minoan I, cf. EVANS, *Palace of Minos*, II, p. 492, fig. 297 *a*; *Pseira* p. 25, and has even been observed on Late Minoan I *b* sherds at Gezer in Palestine, cf. ib., III, p. 313, fig. 203. The sacral ivy chain pattern, more freely developed in a Late Minoan II adaptation is also to be found on sherds from El-Amarna, cf. *ib.*, IV, p. 749, figs. 731, 732. From the purely stylistic point of view the pattern on our gold cup belongs most closely to Late Minoan I, but since it is a question of products from a wide Mainland and Aegean area, they may be assigned with regard to their dating to the Palace Style epoch proper in Knossos as defined by EVANS, *Palace of Minos*, IV, p. 322. We are thus justified in dating our gold cup to a period corresponding to Late Minoan II in Crete which agrees well with the find of our Palace Style vase No. 3 in the same tomb. I therefore date the gold cup to about 1450 B. C.

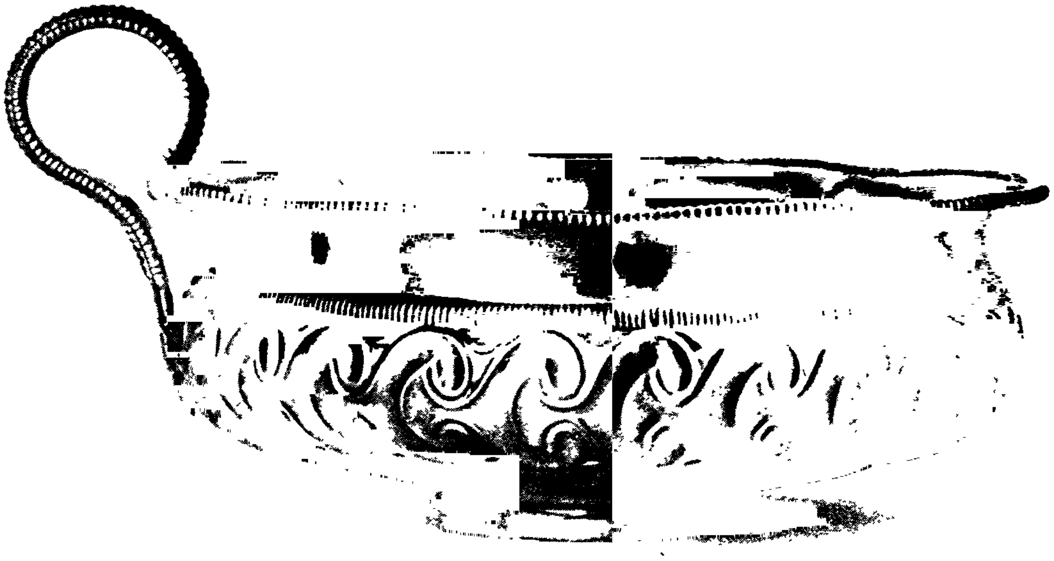


Fig 88 Gold cup from shaft I (No 19)

The other gold objects found in the shaft obviously constitute a woman's parure and will now be described in the order they were worn, beginning with the head (Pl. III).

20) Two pendant ornaments (Fig. 89 and Pl. III). These consist of an outer ring, formed of two thin gold leaves soldered together, decorated on both sides with comma-like petals,

projecting from a segmented inner torus, d. 5.5 cm., d. at the inner orifice 3.2 cm. Inside these rings small gold rosettes with 16 petals and a hole in the middle 0.5 cm. wide, similarly composed of two soldered gold leaves, decorated on both sides, d. 2.6 cm. The flower is suspended in the ring by a thin gold thread, fastened to the edge of the flower, perpendicularly to it, and to a pendant piece, that passes through the outer ring, perforated on the inside, bent on the outside into the shape of a loop parallel with the outer ring. L. of pendant piece 1.5 cm. The suspension arrangement is missing in one of the pendant pieces.

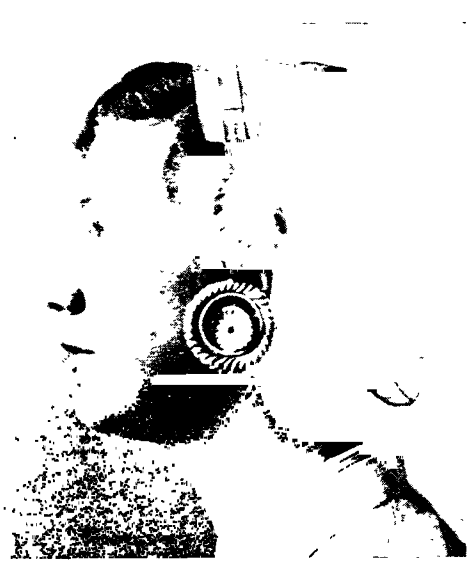


Fig 89. Pendant ornaments of gold (No. 20).

Our pendant ornaments are evidently a substitute for ear-pendants. They are too heavy to have been worn suspended from the ears — weight 20.06 gr. — and also lack the small gold-hook necessary for such attachment. The small loop is parallel with the broad ring and a smaller connecting ring would be parallel, because of the shape of the loop, with the pendant ornament; if it were a question of an ear-pendant, the smaller connecting ring would be at right angles to the ornament in order to allow the latter to hang free and so that the loosely suspended rosette could move freely. This suggests that the ornaments in question are not real ear-pendants. For the arrangement of genuine ear-pendants cf. KARO, *Schachtgräber*, Pl. XX, 61.

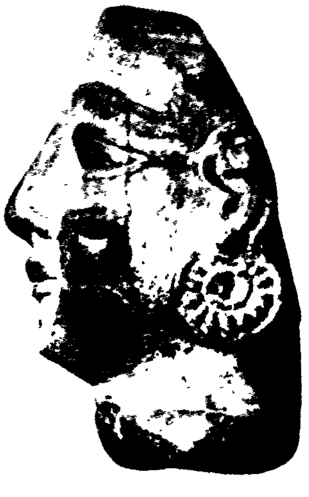


Fig 90 Ivory head from Sardis

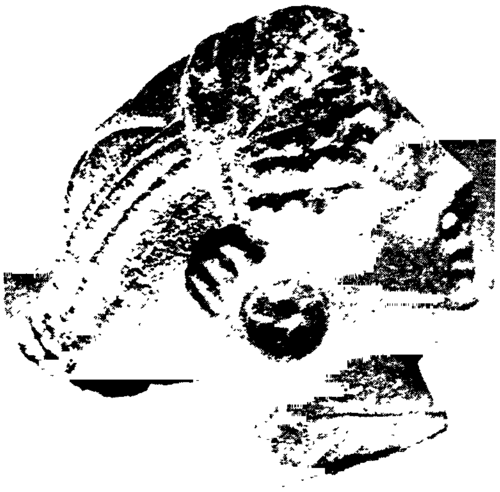


Fig. 91. Limestone head from Cyprus in the Cyprus Collection at Stockholm

For the arrangement of the ornaments I cannot cite any older parallels than a small ivory head from Sardis, found in a tomb of Early Lydian type, cf. BUTLER, *Sardis*, I: 1, p. 140 f. (Fig. 90) — here possibly real ear-pendants — and a small limestone head from

Cyprus (Fig. 91), now in the Cyprus Collection at Stockholm, cf. *The Swedish Cyprus Expedition*, III, p. 265, Pl. LIII, No. 579, dated to the first half of the 5th century B. C., *ib.*, p. 289. We there see a pair of similar large ornaments which cover the greater part of the ear — a part of the ear drum is indistinctly seen behind them. The ornaments are suspended by a band, broader on the crown of the head, narrower at the sides, where a lock of hair is laid over them from in front and is held behind them by a hair-ornament. It seems as if the band formed the fore-part of a hair-net or of a hood completely covering the back of the head.

The custom of wearing ear-pendants is un-Minoan, but reached the Greek Mainland at a very early date. In a tomb at Asine from the early Middle Helladic period, a pair of small ear-pendants were found *in situ*, cf. *Asine*, p. 259, and, as there pointed out, they indicate Anatolian connections, being of common occurrence in Troy II—V and Alishar Hüyük II. That the custom is foreign to Crete, is evident from the fact that earrings are never depicted in the sumptuous female parure in the frescoes from Knossos, where the artists would undoubtedly have included them, had they been in vogue, f. inst. in miniature frescoes, on which court ladies in elaborate toilet appear, described by EVANS in the following vivid manner: "they are fresh from the coiffeur's hand with hair *frisé* and curled about the head and shoulders; it is confined by a band over the forehead and falls down the back in long separate tresses, twisted round with strings of beads and jewels" (*Palace of Minos*, III, p. 49).

21) Necklace, consisting of 59 gold beads of different kinds (Pl. V: 1) with a pair of larger pendant beads in the middle, as shown in our reconstruction. The lower of the two pendant beads (1) is composed of thin gold-plate in the shape of the perianth of a lily with four unrolled petals and with the flower perforated in the direction of the perianth. H. 1.9 cm., br. 1.6 cm. It has close parallels in the elegant gold-foil lilies from the bee-hive tombs at Dimini and Volo, published by KOURONIOTIS, *Ephemeris Archaiologiki* 1906, p. 232 ff., figs. 7—9. On one side the petals are lacking, obviously in order to adjust the bead to the surface, on which it rests. Possibly, this is also the case in connection with the lily from Volo, concerning which KOURONIOTIS says that it has had six petals, *ὧν ἓν ἀπεκόπη* (*ib.*, p. 233).

Between this pendant and the necklace proper a large spherical bead (2) is inserted, d. 1.8 cm. It is decorated with small circles of granulated work spread over the surface and with double rows of granulated work around the middle where the two halves are soldered together.

Almost identical gold beads with granulated work have been found in several places in Late Helladic II contexts, in Mycenae in tombs 55 and 515, in the Argive Heraeum in tomb 44, in Asine in tomb 1, and in the bee-hive tomb at Vaphio (cf. WACE, *Chamber Tombs*, p. 192; BLEGEN, *Prosymna*, p. 270; *Asine*, p. 371, No. 5, fig. 241; *Ephemeris Archaiologiki* 1889, p. 151).

In the middle of the reconstructed chain a melon bead (3) occurs, l. along the string-hole 0.7 cm., d. 1.0 cm. At either side of it a long drop-shaped bead (4) with four lobes along its long axis, separated by granulated work, l. 1.4 cm., br. 0.7 cm. Like the other beads it is composed of two pieces soldered together, and the joint is masked by a double row of fine granulated work while the other two depressions between the lobes have a single row. Then a bead in the shape of a Mycenaean, flatly conical button (5) follows on either side, l. along the threading hole 0.6 cm., d. 1.0 cm. They have granulations around the threading hole and around the periphery at the base of the cone. Four smaller beads (6) of the same type as the large granulated one between the lily perianth and the chain also belong to the neck-chain; l. along the string-hole 0.5 cm., d. 0.8 cm. These have double rows of granulations around the middle, masking the joint. In addition, 8 smaller melon beads (7) of varying d., 0.6—0.3 cm.; 29 smooth, round beads (8), d. 0.9—0.2 cm.; 11 beads made of grains of gold soldered together in three, two, and one rows (9), d. 0.3—0.2 cm. — Total weight of the necklace 16.55 gr. It should be emphasized that the arrangement of the various types of gold beads is entirely hypothetical.

It is certainly the richest collection of granulated work that has ever come to light in Greece in one find. For the granulation technique cf. EVANS, *Palace of Minos*, III, p. 412, and the literature there quoted; also CAROLINE RANSOM WILLIAMS, *Gold and Silver Jewelry and related Objects, Cat. of Egyptian Antiquities*, New York 1924, p. 33 ff. WACE has referred with perfect justification where the technique of granulation is concerned, in which each grain is attached separately, to the suggestion made by me in connection with other finds in our necropolis that the greater the expenditure of labour, the greater the value of the product, cf. *Royal Tombs*, p. 62 f. The granulated work is another instance of the Mycenaean craftsman's capacity for taking infinite pains with minute objects — "such work, demanding the utmost skill in putting together a great number of tiny pieces, was highly prized by the Mycenaeans" (WACE, *Chamber Tombs*, p. 192).

22) Necklace, consisting of 20 lily-shaped gold beads and 19 shield-shaped beads inserted between the former (Pl. V: 2 and Fig. 92: 1). Some of those were found scattered in the tomb, but the way in which the shield-shaped beads fit the spaces between the volutes of adjacent lilies indicates that they have undoubtedly formed part of the same necklace. The beads of either type comprise an ornamented obverse and a plain reverse by means of a slight overlap of the rims of the former. The front sheets have been originally modelled on a core or matrix, no doubt of steatite, of the kind found on various sites (cf. below p. 147). The lily-shaped beads, l. 1.9 cm., br. 1.5 cm., th. 0.3 cm., have a boss at the base perforated for threading, then two long petals ending in volutes with the space between them filled by a solid fan-like ornament, composed of radiating ridges, and edged with a line of beading, evidently representing the stamens. In reality we here have a composite plant motive with dotted upper margin of the papyrus tuft combined with the lily, called the '*waz*-lily' by EVANS, *Palace of Minos*, II, p. 779. It seems as if the type had originated in goldsmith's work and then been adopted in frescoes, f. inst. the lily crown of the 'Priest-King' (cf. *ib.*, II, p. 775 ff.) and later on pottery of the Palace Style (cf. *ib.*, IV, p. 323 f.). It is met with in Crete during Late Minoan I and had been imitated on the Mainland at so early a period that it actually occurs in the shaft graves (cf.

Karo, *Schachtgräber*, p. 311). As to the motive cf. Furumark, *Aegean Decorative Art*, p. 49 f. — The two outermost flowers are smaller, l. 1.6 by 1.4 and 1.5 by 1.1 respectively. Both have two raised circular segments instead of chevrons and beading in the space between the volutes, being in this respect more like the conventional *waz*-lily. — The shield beads, br. 1.0 cm., h. 0.9 cm., are U-shaped with a line of beading around the curved side and with two laterally placed groups of curved lines bordering the straight side, along which the perforation for stringing passes. On the enclosed field two engraved arches are parallel with the arched beading. The same motive is met with in sculpture and in frescoes laterally placed in triglyph bands. — The necklace, in its reconstructed form, measures 32 cm. in length. Weight 22.8 gr.

A necklace of exactly the same type with alternating lily- and shield-shaped beads was found by Blegen in tomb 11 at the Argive Heraeum, cf. *Prosymna*, Fig. 577, No. 1. But there are certain differences as regards details. On the necklace from the Heraeum the space between the lilies is always filled with circular segments and edged with a line of beading, and on the shields a line of beading around the whole edge encloses a field consisting of four narrow vertical panels (cf. *ib.*, p. 267 f.).

23) Necklace, consisting of 53 lily-shaped beads, like the eyes for 'hooks-and-eyes' with perforation for stringing in the middle (Pl. V: 3 and Fig. 92: 2). L. along the stringhole 0.6 cm., br. 1.0 cm. They are composed of two pieces soldered together, modelled on the same core, but the upper surface bears rows of fine granulated work on the petals ending in volutes. In the centre of the volutes small eyes of a black substance originally occurred between the granulations, though the majority of these are now missing, only a few remaining at various places. L. of the necklace about 30 cm. Weight 17.10 gr. The beads were once filled with some kind of black substance, a technique also known in Crete, cf. Evans, *Palace of Minos*, III, p. 411, and in Egypt, cf. Williams, *Gold and Silver Jewelry*, p. 119 f. The content which fell out as a black powder proved to be magnetite sand, cf. analysis in Appendix, p. 198.

This type of bead, without granulation, however, is very common in Mycenaean tombs both in gold and in glass, cf. e.g. Dendra, tomb 2, *Royal Tombs*, p. 105; *Asine*, tomb I: 2, p. 390, tomb I: 6, p. 406; cf. also No. 25 below.

24) Necklace, consisting of 31 cordately flower-shaped gold beads (Pl. V: 4 and Fig. 92: 3). H. 1.4 cm., br. 1.1 cm. They are composed of two sheets of gold, one flat piece for the back, quite separate from the frontal decorated sheet, resembling the necklace beads in No. 22. The flowers have a perforated boss at the base for stringing. The petals are rolled inwards in volutes, each separated from the other by a ridge. The space above the volutes is filled with a series of raised circular segments and edged with a line of beading. The flower may be described as a hybrid of the 'sacral ivy', the heart-shaped middle part with inward-rolled petals and intermediate ridge, superimposed on a conventionalized papyrus flower. Glass beads were probably interposed between these elaborate beads in order to keep them apart. L. of the necklace about 35 cm. Weight 20.59 gr.

Other gold beads of this type are unknown to me. The same motive, however, but without the marginal beading is found on a gold-plate from Mycenae, cf. *Ephemeris Archaiologiki* 1888, Pl. IX, 5, on a terracotta ornament from the tomb of Genii, cf. *BSA*, XXV, p. 384, No. 4543 *a*, fig. 87 *c*, on an ivory ornament from the bee-hive tomb at Menidi, and on a wall painting from Tiryns, cf. SCHLIEMANN, *Tiryns*, Pl. VI, XII. The same motive in a more elaborate composition also occurs on a faïence pendant from the Temple Repositories at Knossos, cf. EVANS, *Palace of Minos*, I, p. 498, fig. 356. For the 'sacral ivy' part of the flower cf. also the stylized iris in the field beside the 'Priest-King' at Knossos, EVANS, *Palace of Minos*, II, p. 786, fig. 513, and in the decoration on a silver spoon, No. 38 below, and other references quoted there.

25) 7 gold beads (Pl. V: 5 and Fig. 92: 5). Lily-shaped, like the eyes for 'hooks-and-eyes'. H. 0.5 cm., br. 1.0 cm. 5 of these have a threading hole through the middle, 2 have threading holes in the two lateral spirals. They are composed of two sheets of gold, a flat piece for the back, a decorated one for the front, like the beads of necklace No. 23, but without granulated work. Weight 1.2 gr.

In those instances where the number of beads is insufficient to form a whole necklace, we may suppose that they were either combined with links of another type or served as hair ornaments, as, f. inst., on fresco fragments from Knossos, the 'ladies in blue', cf. EVANS, *Palace of Minos*, I, p. 545, fig. 397 and *ib.*, II, p. 681, fig. 431, or the court ladies with their tresses, twisted round with strings of beads and jewels, *ib.*, III, p. 49.

26) 7 gold beads, ribbed and shaped like grains of wheat (Pl. V: 6 and Fig. 92: 4). L. 1.0 cm., br. 0.5 cm. This type is a very common both in gold and glass, cf. e.g. *Royal Tombs*, pp. 29, 30, 106; *Asine*, pp. 390, 406.

27) 8 large cup-shaped rosettes (Pl. III and Fig. 93, a—b). D. 6.5 cm. They have 14 large petals and 14 smaller ones around a raised flower centre, surrounded by beading. On the back of the rosettes 4 soldered, elongated loops, placed diagonally to each other leaving space for a band, 2.2 cm. broad. They have no doubt once adorned a girdle; the reconstruction (Pl. IV) gives a measurement of 68 cm. round the waist. Because of the pressure applied when in use the cup-shaped flowers are more in-curved on two opposite sides, indicating that the flowers were worn facing outwards, in order that the rosette-edges should not press against the figure. Weight 55.57 gr.

Remains of another girdle with gold edge were found in the bee-hive tomb at Dendra, cf. *Royal Tombs*, pp. 40, 55. Other girdles cf. WACE, *A Cretan Statuette in the Fitz William Museum*, Cambridge 1927, p. 37. One of the most detailed representations of a girdle is to be found on the small shell cameo, depicting a dagger and belt, that EVANS found in Knossos, cf. *Palace of Minos*. IV., p. 932, fig. 904. The belt is here adorned with round plaques, probably in imitation of metal, with double S-scrolls in the interstices. For the arrangement of our gold rosettes cf. also EVANS, *Palace of Minos*, III, p. 41, fig. 25 *d*, where a fragment from a fresco representing embroidery on a robe is reproduced. A row of rosettes on the lower part of the fragment could belong to just such a belt as ours. Other ornamented girdles reproduced in faience are known from the Temple Repositories, cf. EVANS, *Palace of Minos*, I, fig. 364, *c*, *d*.

From later time we have some parallels on Cypriote sculptures, cf. *Atlas of the Cesnola Collection of Cypriote Antiquities*, I, No. 285, Pl. 48. "The figure wears a short-sleeved garment and waist-belt passing between the legs. On the belt are sculptured in relief three rosettes, the central rosette united with a perpendicular band". Cf. also No. 277, Pl. 42.

28) Gold ring (Pl. VII: 1, *a—c*). Ring as well as bezel are apparently of massive gold; weight 7.65 gr. Greatest br. of hoop 2.0 cm., from arch to back of the bezel 1.2 cm.; bezel l. 2.5 cm., br. 1.5 cm. The lowness of the arch is scarcely due to any distortion. The ring is too small even for the finger of a woman. It probably belongs to the early class of signet rings with small hoops that were intended for suspension, and not for wearing on the finger [1]. The hoop is smooth.

The bezel has, as is usual on gold rings, a dramatic religious scene. To the extreme left a massive isodomic structure appears erected, as it seems, in two storeys, each crowned by a cornice. The upper storey seems to be set somewhat further back. Behind this building the upper part of a column with capital and entablature appears, extending to the right where it is supported by a complete column rising from a disc base. Horns of consecration are depicted on the top of the entablature. Between the building and the column on the right are the very worn contours of what seems to be a female figure seen wholly in profile and depicted in the posture of a devotee with raised arm and somewhat forward-bent head; several dots behind the figure indicate her flowing hair. The breast is seen in profile; the waist is represented by a dot-like indentation, the lower part of the body is clad in an animal skin, the short tail tip of which is seen behind the woman's strongly marked legs and feet. Immediately in front of the waist two small indentations appear, possibly indicating the right hand holding an object. — Two other women are present to the right of this scene — the ground is indicated by a horizontal line which extends under the base of the column and thereby connects the scenes, otherwise freely grouped. These women with naked breasts are dressed in typical flounced skirt. The lower part of the body is seen in profile, facing to the left, the upper part of the body from in front and the head, again, in profile, that of the first woman facing right, that of the second facing left, as is indicated by the row of dots representing their hair; on the first this is visible between the neck and the upward-bent right arm, on the second along her left arm which points obliquely downwards. Both are otherwise in the same posture, but the woman on the right throws her head backwards as if in ecstasy. The position of the arms, the pose of the head and the indication of the hair give a clear impression of movement — of dancing. Behind the women farthest to the right a sacred tree rises from behind what appears to be a baetylic stone of subconical form, both set in a small enclosure.

For an explanation of this detailed cult representation see below p. 132 ff.

29) Three-sided sealstone of prism type, of mottled agate with gold-plated threading

---

[1] Cf for the evolution of the Minoan signet-ring, EVANS, *Palace of Minos*, III, p. 139 ff ; *ib.*, IV, p. 510 ff.

hole (Pl. VII: 2, *a—c*). L. of side along threading hole 2.1 cm., br. 2.1 cm. This three-sided type is of rare occurrence during the Late Helladic Period and according to EVANS, *Palace of Minos*, IV, p. 493, note 3, represents "a survival of a Middle Minoan III three-sided form". All the examples known come from the Peloponnesos, one from the Vaphio tomb, cf. *Ephemeris Archaiologiki* 1889, Pl. X, 5 and 6 and text p. 165, another without exact information as to its origin, cf. FURTWÄNGLER-LOESCHKE, *Mykenische Vasen*, Hilfstafel E, 19. Both of these, like ours, have only two representations, the third side is blank, since the stone probably served as a bracelet ornament, the blank side resting against the wrist.

On one side (*b*) two recumbent mountain goats are depicted with very long horns, most closely resembling the wild-goat on a flat-sided lentoid from Middle Minoan II—III, now in the British Museum, cf. EVANS, *Palace of Minos*, IV, p. 542, fig. 496. EVANS holds that the exaggerated prolongation of the horns is an indication of relatively high age — but in our case hardly higher than Late Helladic I, as is proved by the extraordinarily well-conceived naturalism and by the representation on the other side. The goat in the foreground conceals the greater part of the one lying behind. Such freedom in the artistic representation is entirely unknown in the schematically expressionistic art of the old contemporary civilizations, but, on the other hand, is a characteristic feature of Minoan-Mycenaean art [1]. The goats are exquisitely carved, and their long shag is plainly visible. Below them appear two parallel lines, no doubt merely a lower limit for the scene, not a "graduated base", as EVANS, *Palace of Minos*, III, p. 124, interprets a similar feature on a lentoid intaglio with a seated lion from the Vapheio tomb. However, I believe it is correct to a certain degree, to regard this lower limit as an architectonic feature, showing influence from the wall paintings *al fresco* which are bordered at the bottom by bands that correspond to cornices, cf. EVANS, *Palace of Minos*, I, p. 687 f.

The other representation (*c*) shows a lion rending a similar mountain goat. The lion, pouncing on the goat, has plunged its teeth into the goat's neck, which is thrown back in such a way, that the horns over-lap the lion's body. The goat's shag is here also visible, together with the lion's mane and more abundant hair on the hind legs and under the belly. The representation depicts a frequently recurrent mode of attack — the instinctive grip of the beast of prey, fastening on the cervical vertebrae in order to paralyze his quarry instantly, cf. EVANS, *Palace of Minos*, III, p. 123. The scheme frequently occurs, f. inst. on the reverse of the lion-hunting dagger from Mycenae, which shows a lion bringing down a gazelle, and on a number of seal stones and intaglios, cf. EVANS, *Palace of Minos*, IV, p. 527, where the victim is by turns a bull, a stag, or a large horned sheep. EVANS holds that the lion's hind legs in the fully developed scheme either grip the victims quarters, or alternatively that one of them rests momentarily on one of the hind legs of his quarry, but this latter conception rests upon an incorrect interpretation. EVANS even adds: "but in this case, too, neither leg touches the ground and the whole weight of the great beast is thrown on his prey". In our representation it is clearly evident that the lion's right hind paw has been over-lapped by the left hind leg of the agrimi — the claws appear below the leg! — and the weight of the lion cannot even 'momentarily' rest on his quarry. The position of the paws and the legs also plainly show that the lion stands on the ground even if the latter is not at all indicated. The perspective depth of the representation is emphasized by the over-lapping, as on the other side of the same stone, but we have here to reckon with an entirely different spatial conception, namely the bird's eye perspective — or, better, cavalier perspective —, which lets the plane space of the action extend from border to border, and represents the objects in the space in profile — as a rider sees the ground from above, the objects on it from the side (cf. *Royal Tombs*, pp. 43 f., 47). On a lentoid intaglio from the Vaphio Tomb, as well as on a very closely related gold bead-seal from Thisbe, reproduced in EVANS, *Palace of Minos*, III, p. 124, fig. 74, the lion stands on the same base line as the bull. Here an entirely different perspective has been employed — possibly dependent on the fact that we have here representations of scenes which bear a relation to an architectural decoration.

---

[1] For instance, in the siege scene on the silver rhyton from shaft grave IV in Mycenae (KARO, *Schachtgräber*, Pl CXXII) the warriors overlap one another in a quite unschematic manner

We have therefore to reckon with a double perspective, on one side a cavalier perspective, on the other a perspective from the ground or natural horizon. When the latter is met with, it is indicated by one or more base lines. The double spacial conception in gem carving wholly corresponds to the two styles in vase painting. 'unity style' and 'zonal' or 'tectonic style', as they have been characterized by MATZ, *Die frühkretischen Siegel* (called by him "Flächenmusterung" and "Streifenverzierung"), and FURUMARK, *Aegean Decorative Art*, p. 13 ff.[1].

EVANS admits that the purely Cretan schema, to which the lion leaping on his prey is an adaptation, is "the dog springing on the back of agrimi or stag" (EVANS, *Palace of Minos*, IV, p. 527 and figs. 470, 471) and that "a Mainland school grew up showing special proficiency in this subject" (*ib.*, IV, p. 551) — all intaglios so far known are of Mainland provenance. But EVANS continues to see a Minoan conception in the motif. For my part I have tried to explain the great popularity of the scheme on the Mainland in interpreting the lion as the armorial animal of the Mycenaean prince and in ascribing a symbolic significance to representations of this kind, cf. *Royal Tombs*, p. 121 ff., and *Dragma*, (*Acta Inst. Rom. Regni Sueciae, Series altera, I*), p. 379 ff.

30) Circular sealstone of semi-translucent, light agate (Pl. VII: *a—c*). The threading hole follows the vertical axis and the stone has no doubt formed a bracelet ornament (cf. *Royal Tombs*, p. 58). D. 2.9 cm. A very fat pig or boar with the dorsal bristles raised moves calmly forward. Above the back there is a curiously shaped engraving, parallels for which I have sought in vain on other gems, but the explanation of which I believe to have found.

The representation is actually of very great interest, because the stone in question is a real palimpsest — the first one of its kind, as far as I know. The object above the boar's back is undoubtedly the most deeply engraved parts of a lion with the hind legs over the boar's head and the neck with the bushy mane over its hind quarters. In front of the boar's

---

[1] A thorough up-to-date survey of the Mycenaean gem material seems to me important, since we now have, thanks to the latest excavations, further reliable material for dating Certain preparatory work has already commenced

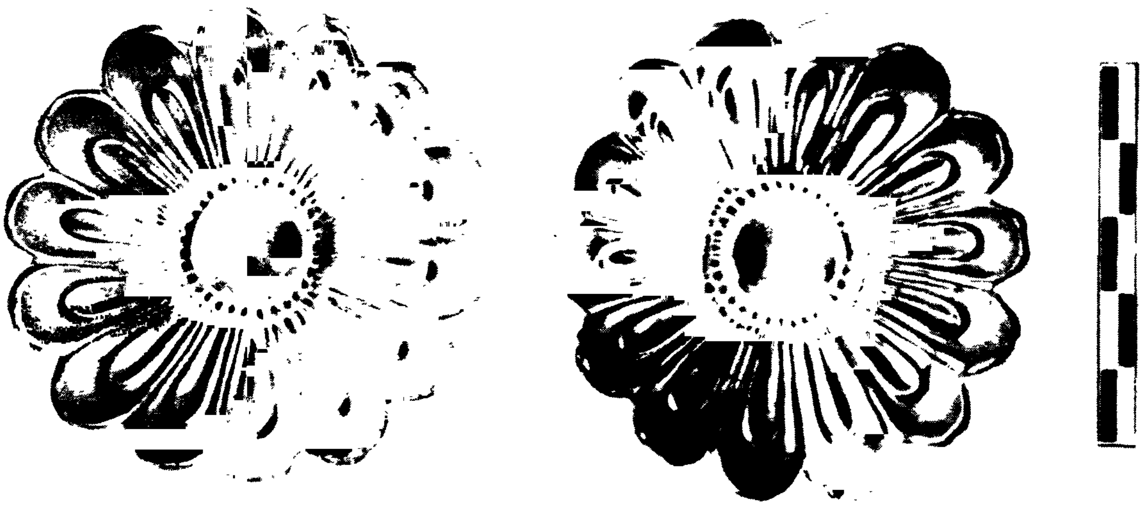


Fig. 93. Girdle rosette of gold (No. 27).

a) Frontal view

b) Rear surface with loops.

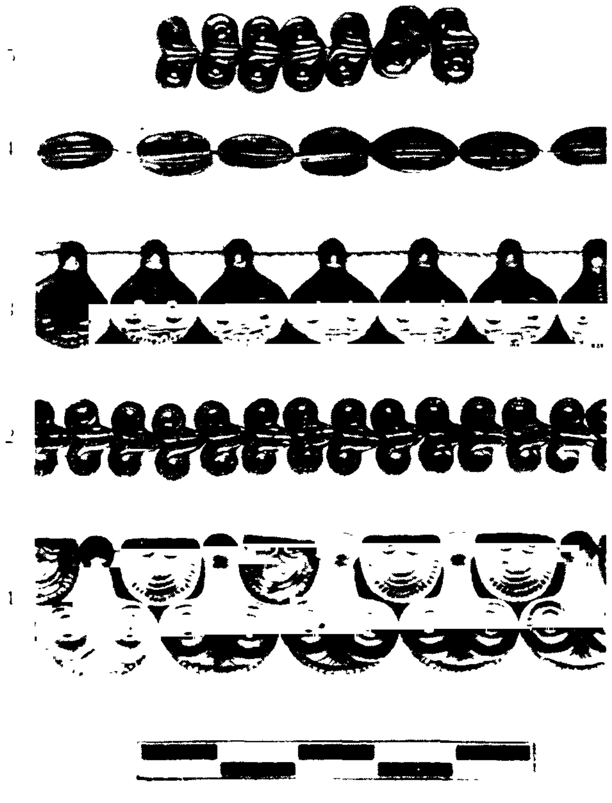


Fig. 92. Gold beads from chamber tomb No. 10.

1) Lily- and shield-shaped beads (No. 22)
2) Lily-shaped beads with granulated work (No. 23)
3) Cordately flower-shaped beads (No. 24).
4) Beads like grains of wheat (No. 26)
5) Lily-shaped beads without granulated work (No. 25)

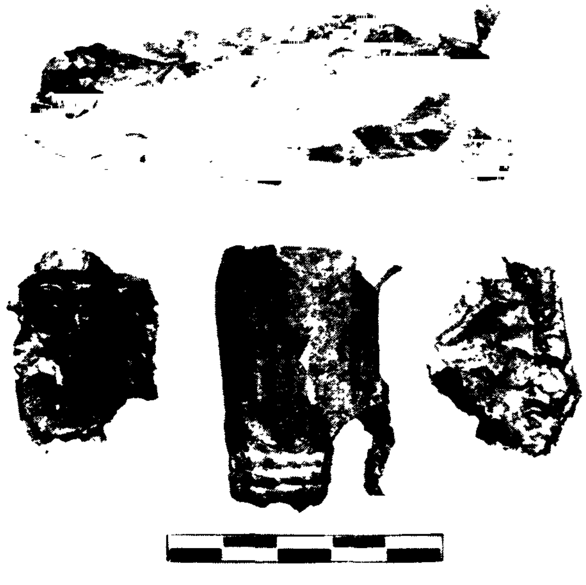


Fig. 94. Gold sheaths for ornamentation (No. 31)

head faint traces of the lion's hind legs are also to be discerned, just as the lion's head is faintly distinguishable above the hind quarters of the boar. The lion's posture has quite obviously been the same as that of the lion rending the goat on the preceding seal stone. This having been clearly established, I proceeded to a closer examination of the boar in order to ascertain if any traces of an older representation were hidden under or in the grotesquely obese animal. I then traced two upward-turned incisions behind the right buttock of the boar, which may possibly represent hide-folds on the neck of a bull with lowered head, in whose neck the lion was plunging his teeth as in the scheme indicated above under No. 29. This supposition was confirmed by a closer examination of the boar's forequarter. The front legs are placed entirely unorganically under the heavy body — like a pair of

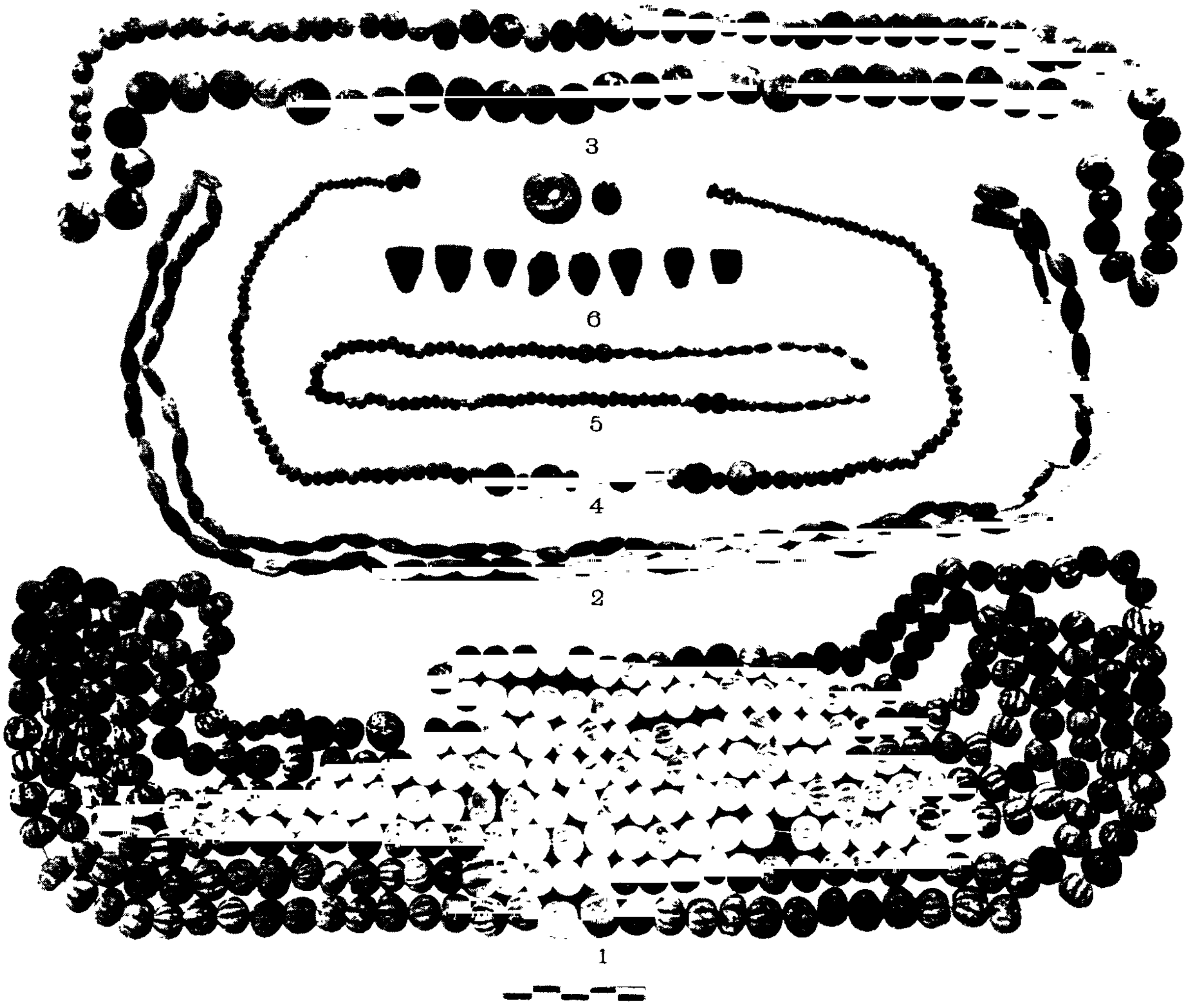


Fig 95 Faïence and glass beads from chamber tomb No 10 (No 32)

1) 'Melon beads' of faïence
2) Long gadrooned beads of faïence.
3) Spherical plain beads of glass
4) Blue glass beads of different shapes
5) Black faïence beads of different shapes
6) Beads of faïence in the form of bulls' heads

chair-legs; two incisions occur under the lower jaw, apparently without relation to the representation of the boar. The left shoulder is also exaggerated beyond all natural proportions and between the forelegs of the boar the testicles of the bull are to be seen.

Actually we have here the right loin and the rear part of the haunch of the bull whose head is faintly visible behind the boar. The part of the lion's body above the boar had been too deeply engraved to be wholly obliterated in the later re-cutting, although in re-engraving the stone the other deeply hollowed portions were concealed as successfully as possible within the body of the boar. A depression appears on the boar's flank, probably representing the outline of the bull's belly. A second depression runs in front of the boar's left buttock, and bears no relation to the later context. I have had a drawing made reconstructing the stone as originally wrought and though this reconstruction cannot, of course, claim to be accurate in every detail it is certainly correct as to general features.

We shall return in another connection, see below p. 148, to the importance of this sealstone in the history of the technique of gem-engraving.

In addition to these gold ornaments for feminine attire we also found a number of more fragmentary objects.

31) Thin gold-sheaths for ornamentation (Fig. 94). Weight 3.50 gr. Special notice must be given to two pieces, one of which has three mouldings at one end, that had formed sheathing around a staff. Other fragments have covered large flowers with petals curled at the ends.

The technique of sheathing less precious material with gold was widely known in Crete as well as on the Mainland, cf. EVANS, *Palace of Minos*, I, p. 675 f.; *Royal Tombs*, p. 103.

Numerous fragments of ivory occurred together with the gold-sheaths, including pieces of a rod, to which the gold-sheaths possibly belonged.

32) A large number of faience and glass beads (Fig. 95) were discovered in the shaft and in the layer of charcoal and ash outside.

a) 315 almost spherical, gadrooned beads, 'melon beads', of faïence, d. along the threading-hole 1.4—0.9 cm., br. 1.6—0.5 cm (Fig. 95: 1), together with numerous fragments of others of the same kind.

b) 97 long, gadrooned beads of faïence, l. 1.6—1.0 cm., br. 0.7—0.4 cm. (Fig. 95: 2). Fragments of others of a similar nature.

c) 92 spherical, plain beads of glass, d. 1.6—0.6 cm. (Fig. 95: 3). Numerous fragments of others of the same type.

d) 130 blue glass beads of different shapes, the majority being oblately circular (Fig. 95: 4). D. 1.6—0.2 cm. 4 circular disc beads with the string-hole along the longitudinal axis of the disc, d. 1.0 cm.; and a number of long, gadrooned beads, l. 1.0 cm.

e) 98 small black beads of faïence, consisting of melon beads, d. 0.5—0.3 cm., and long, gadrooned beads, l. 0.5 cm. (Fig. 95: 5).

f) 7 long, cylindrical, light-coloured beads of glass. L. 2.1 cm., d. 0.6 cm. Fragments of others of the same type. Analysis, cf. Appendix, below p. 198.

g) 1 blue bead of glass in the form of a truncated, concave cone (like a steatite button), l. along the string-hole 0.5 cm., d. 1.3 cm. 1 small, lily-shaped bead of glass, like an eye for a "hook-and-eye", l. along the string-hole 0.5 cm., br. 0.7 cm.

h) 8 beads of faïence in the shape of a bull's head with the string-hole through the forehead; muzzle, eyes, and frontal hair reproduced (Fig. 95: 6 and 96). L. 1.6 cm., br. along the threading-hole 1.4 cm.

No faïence beads of this kind are previously known to me, but the type is met with as a pendant in more precious material. For example an amethyst pendant in the form of a bull's head was found in a grave at Mochlos, cf. *Mochlos*, Pl. X. probably of Late Minoan I date. Other specimens occur in Cyprus, *Atlas of the Cesnola Collection* III, pl. 7, 16. A number of gold pendants in the form of a bull's head from Hagia Triada, cf. PARIBENI, *Sepolcreto di Hagia Triada*, in *Monumenti Antichi*, XIV, p. 729 f., Figs. 27, 28; from Enkomi, MURRAY, *Excavations in Cyprus*, Pl. X—XII.

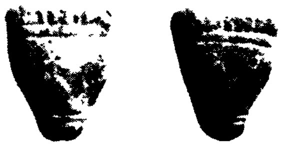


Fig. 96. Beads of faïence (No. 32 h.)

33) 75 amber beads (Fig. 97). D. 4.5—0.8 cm. Various shapes, discoid, spheroid. Fragments of others of a similar nature.

For amber in Mycenaean tombs, cf. below p. 147.

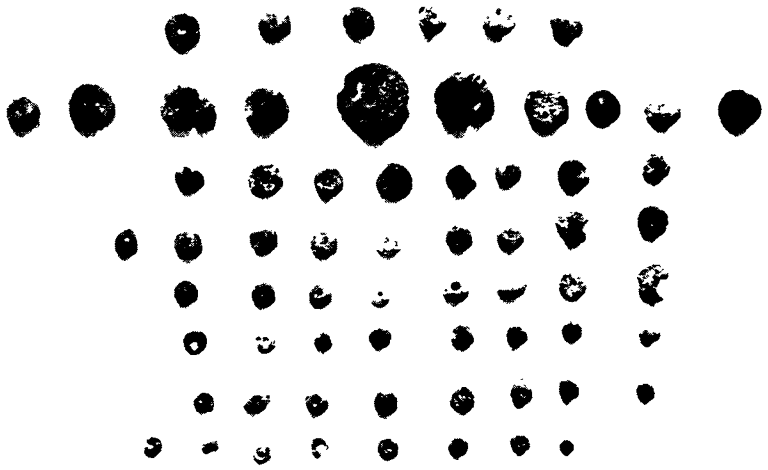


Fig. 97. Amber beads (No. 33)

Shaft II.

In this shaft no skeletal remains were found. The shaft was reserved for burial gifts, the vases Nos. 11—14 being placed above it. The remainder of the shaft was filled with earth; cover-slabs did not exist. It was obvious that here the finds had originally been deposited in an orderly manner, cf. Fig. 98. The great silver crater (Finds No. 34) was placed bottom up, and one of the small silver cups (Finds No. 36) lay inside the great over-turned two-handled stemmed goblet (Finds No. 41).

34) Silver crater with two handles (Fig. 99: 1). H. 21.5 cm., d. between the handles 25 cm., over the handles 23 cm., including handles 30 cm. Broad spreading foot with hollow countersinking below the low stem which together with the side of the body forms a fine S-shaped curve; at the top an obliquely rising, flaring rim. The relatively strongly

projecting handles are attached to the upper surface of the rim by three rivets, and by one at the lower end where the diameter of the body is greatest. The heads of all these rivets are on the inside. The foot, which was broken off in excavating, contains a massive bronze-plate and has been filled with a brownish-black substance, magnetite sand, cf. analysis, Appendix, p. 198. At the bottom of the receptacle a smaller bowl, d. 4.5 cm., depth about 3.0 cm,. was fastened to the foot piece by means of a rivet with the head on the upper surface. No decoration.

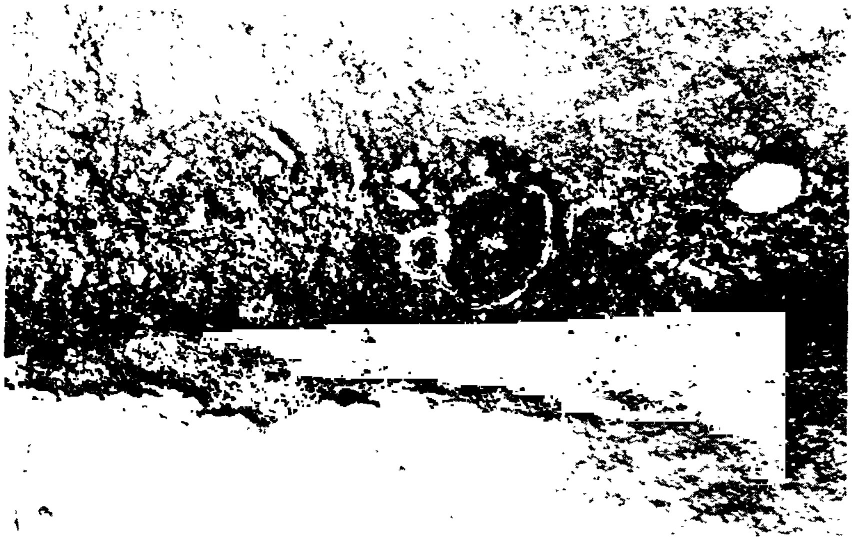


Fig 98 Shaft II during excavation

35) Stemmed goblet of silver (Fig. 99: 2). H. 7.4 cm., d. 10.5 cm. Similar shape to the last, but of squatter proportions. A handle of the same type as that on the crater, but more ring-shaped, attached by two rivets at the top, and one at the lower end, the heads inside. The foot is worked in the same manner as that of the crater with a smaller bowl inside the goblet. Undecorated.

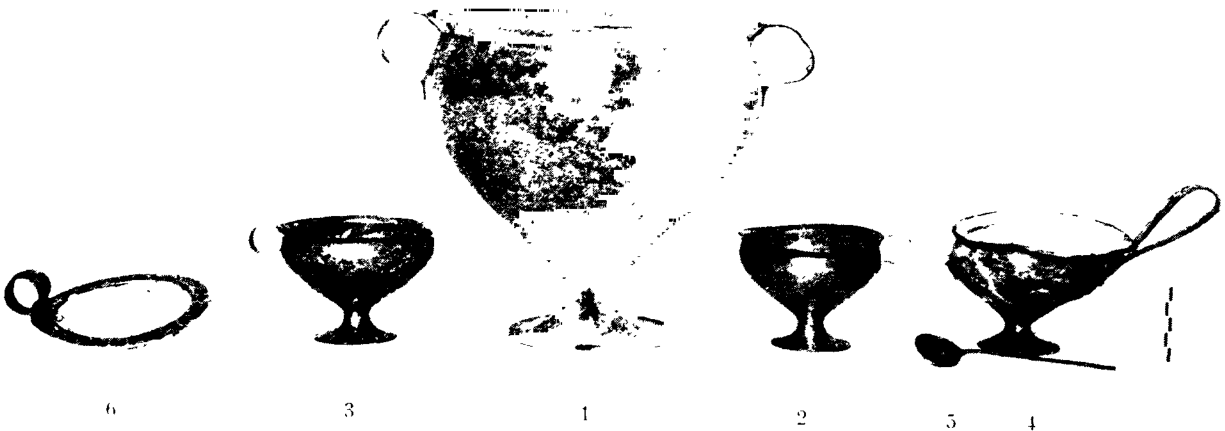


Fig 99. Silver vessels from Shaft II.

1) Crater (No 34).
2) Stemmed goblet (No. 35)
3) Stemmed goblet (No 36)
4) Stemmed goblet (No. 37).
5) Spoon (No. 38).
6) Shallow saucer (No. 39)

36) Stemmed goblet of silver (Fig. 99: 3). H. 7.4 cm., somewhat flattened, so that the largest d. here is 11.0 cm. Otherwise identical to last.

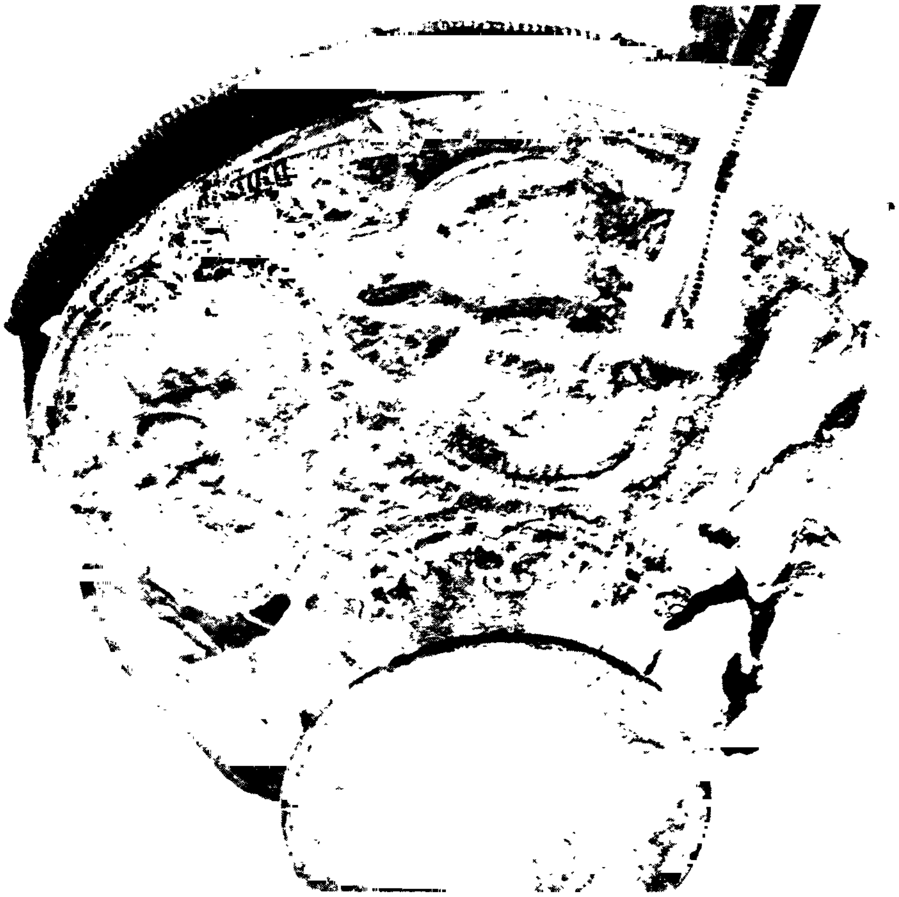


Fig 100. Stemmed silver goblet (No. 37).

37) Stemmed goblet of silver with high handle (Figs. 99: 4, 100, Pl. VI: 1 retouched and Frontispiece). H. 8 cm., approximate d. 12.5 cm. H. of handle from the rim 6.5 cm., its lower attachment being 4 cm. below the rim. Foot as last and body originally identical to the latter. The high handle is made of niello and provided with medial segmented vertical rib of gold. At the top it is fastened to the rim with two rivets, at the lower end with one, with the heads

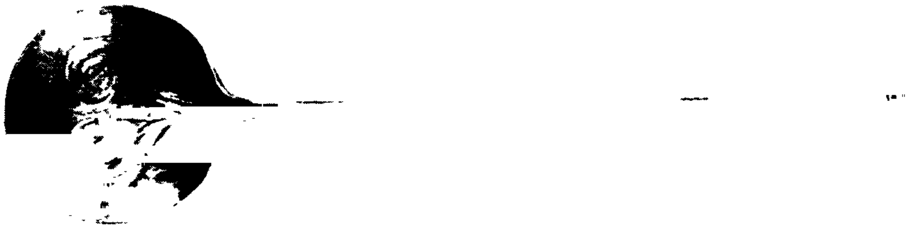


Fig 101 Silver spoon (No 38).

inside. The flaring rim also possesses a segmented rib of gold. The body has a broad decorated belt, executed in *repoussé*, between two segmented ribs. From the upper rib small trefoil-shaped rock or coral motifs project downwards between 5 medallion-like panels, each formed of two larger and two smaller double curved lines with similar trefoil rock-work on the inside of the medallion panel where the curved lines meet. In each panel a waterfowl is depicted in flight. The wings on which the quills are indicated are represented as seen from below, while the rest of the body is in perfect profile. The thin tail and the legs, represented in the swimming position, are similarly indicated. The whole panel, within the medallion as well as without, is also covered with small elevations representing waves. Similar trefoil rock-work ornaments project upwards from the lower segmented line between the medallions, and below the rib a continuous, irregular line occurs with similar decorative features.

We shall return to this goblet below p. 137 ff.

38) Silver spoon, found inside No. 37 (Figs. 99: 5 and 101). L. 13.0 cm., d. of the circular bowl 3.1 cm. The faintly bulbous bowl or scoop is decorated with a heart-shaped ornament with inward-rolled petals ending in a volute and with a projecting ridge in the middle. The ornament is executed in *repoussé* style. Traces of hammering are plainly visible. The sharp edged spoon-handle, quadrangular in section near the base, octagonal towards the tip, has three engraved rings close to its terminal end.

It is, so far as I know, the first silver spoon found on the Mainland. From Cyprus we have a whole series, cf. *Atlas of the Cesnola Collection*, III, pl. 39: 1—6: "The collection contains part or all of eleven such small ladles."

The ornament which adorns the bowl of the spoon, the 'sacral ivy' pattern, is actually one in which EVANS has recognized an Egyptian motive, the sacred papyrus wand-waz. It frequently occurs on a series of scarab types, ranging from the Twelfth to the Eighteenth Dynasty. It is also to be found in the architectural decoration on the doorway of the inner room of the Tomb-chapel of Ukh-hotep at Meir, dating from the reign of Amenemhet II, and an identical pattern appears on the kilt of a Minoan in the paintings of the Rekhmire Tomb, cf. EVANS, *Palace of Minos*, II, p. 744 f., Figs. 481, 480. It is also met with as a pattern on the robe of one of the figures in the Procession fresco at Knossos, cf. *ib.*, II, p. 729, Fig. 456 c; cf. also another fragment of embroidery on robes, *ib.*, III, p. 41, Fig. 25 *f*. It also forms an element in composite plant motives, f. inst. in a stylized iris flower on the 'Priest-King' relief, cf. *ib.*, IV, p. 323, Fig. 263, and later in the Palace Style decoration. — Cf. also above No. 24.

39) Shallow saucer of silver with broad, ornamented gold rim and gold-plated handle (Figs. 99: 6 and Pl. VI: 2). Flattened. Preserved h. 1.8 cm., inclusive of handle 3.6 cm. D. 11.5 cm., of bottom 5.4 cm. The horizontal rim, 1.4 cm. broad, is overlaid with a relatively thick plate of gold, with a segmented rib on the inner side, the remaining section being adorned with a 'whorl shell' motif. The gold-plate is fastened to the under side, which is of silver, with 7 small gold rivets, placed in the spiral eyes. The ring handle, the inner d. of which is 2.5 cm., is adorned with a similar gold-plating, possessing a medial

vertical segmented rib and whorl shells on either side. The handle is fastened to the silver saucer at the top by two rivets through the rim from below, ending in the spiral eyes on the upper surface, and with one rivet at the bottom.

Our silver saucer has a perfect pendant, as regards form and technique as well as ornamentation, in one of the silver saucers found in the Vaphio tomb by TSOUNTAS, cf. *Ephemeris Archaiologiki* 1889, p. 153 and Pl. 7,15 — even the measurements of the two saucers are identical. The same feature also occurs in which the handle and border are overlaid with gold-plate portraying a characteristic 'whorl shell' motive which, however, is more closely spaced and more elaborate on our saucer. This arrangement of spirals quite naturally recalls those bands of coupled spirals which are met with in the sculptured friezes from the south-west porch in Knossos, cf. EVANS, *Palace of Minos*, II, p. 162 f., Figs. 83, 84, and the identical spiraliform decoration that once adorned the façade of Atreus' tomb at Mycenae, cf. NOACK, *Baukunst des Altertums*, Taf. 15 *a*. The same spiral band is also met with on the limestone frieze with half-rosettes and 'triglyphs' from the North-west angle of the Palace at Knossos, cf. EVANS, *Palace of Minos*, II, p. 591 ff. It occurs from the end of Late Minoan I *a* on the painted friezes in the 'Hall of the Double Axes', cf. *ib.*, III, p. 345, and in the Bath-room, cf. *ib.*, III, p. 383. Later, during Late Minoan II, it recurs in a group of Palace Style vases and also appears in plastic execution on the rim of several alabastra from the Throne room, cf. *ib.*, IV, p. 939. With entire justification, in my opinion, EVANS has *ib.*, IV, p. 110 called attention to the connection between the 'whorl shell' motive and the spiraliform patterns. He there says: "The influence of shell motives on Minoan decorative Art has hardly received sufficient recognition. It is in fact omnipresent, though often inextricably interwoven with spiraliform patterns of old Aegean inheritance. It is a moot point whether the simple coils that appear among decorative elements before the close of the Early Minoan Age may not have been simply due to the suggestion supplied by one or other of the common whorl-shells." Both on our vase and on that from Vaphio it is obvious that a shell of the *Dolium* genus, probably *Dolium galea*, has served as a model for the representation.

So far as we now know, the technique of attaching a plate of gold to the rim on silver bowls is a feature, espcially characteristic of the Mainland. In addition to the two examples here mentioned there is a handle of identical form of a saucer from the beehive tomb at Berbati (unpublished). Another example was discovered in the Fifth Shaft Grave at Mycenae with *repoussé* gold handle and gold-plated rim, cf. KARO, *Schachtgräber*, Pl. CXXXVI, No. 786 7.

40) Shallow bowl of ivory, overlaid with thin gold-plate inside and out (Fig. 102, a—b). H. about 3 cm., d. 12 cm. Three broad strips of leaf gold have been pressed against the ivory, which is badly affected by humidity, and owing to the short time at our disposal for the conservation, it could not be completely reassembled. In order to facilitate the removal of the bowl from its place in the shaft we were compelled, paraffin not being available, to pour molten wax over it and the surrounding earth, whereby it was possible to preserve its shape.

Pottery.

41) Stemmed goblet with two loop-handles (Fig. 103: 1). H. 15.8 cm., d. 20.0 cm. Slightly hollow foot, with a deep circular countersinking below the relatively low stem. Wide, open shape with convex side and flaring rim. Two low loop-handles springing horizontally from the rim. Greyish-yellow clay, covered with a greyish slip, intended to give the vase an appearance of silver, cf. below p. 137. Undecorated. For the shape, cf. above No. 14, p. 71 f.

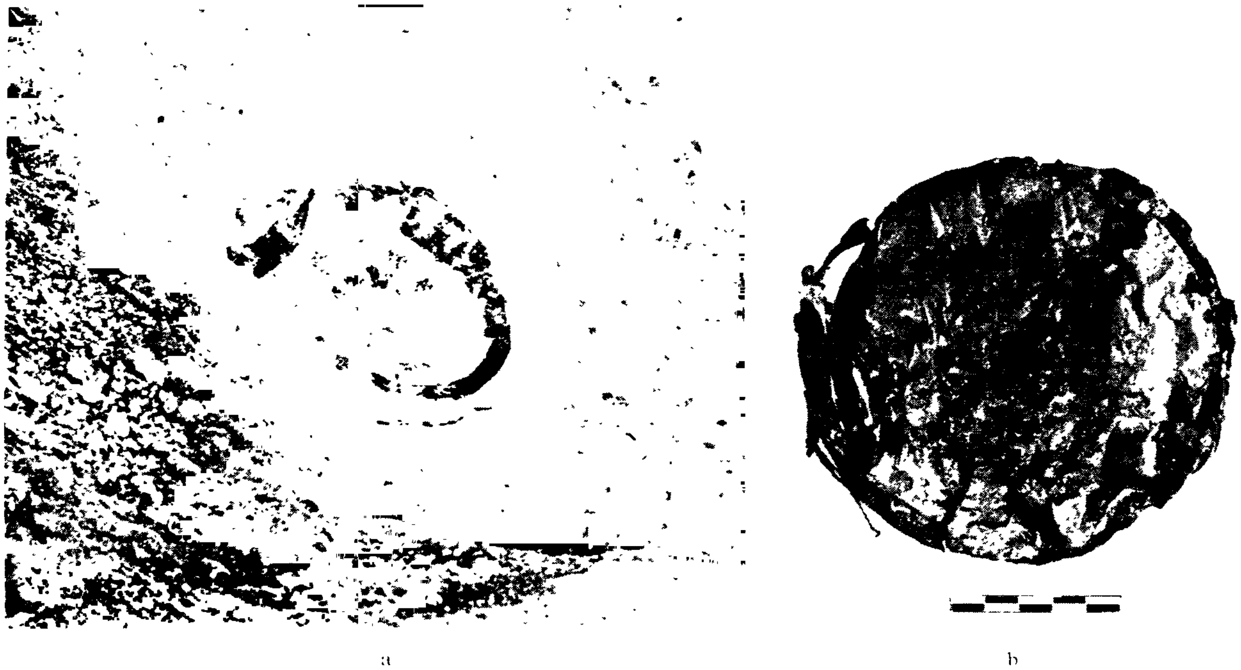


Fig. 102. Shallow bowl of ivory overlaid with thin gold-plate (No. 40)
a) During excavation b) After excavation

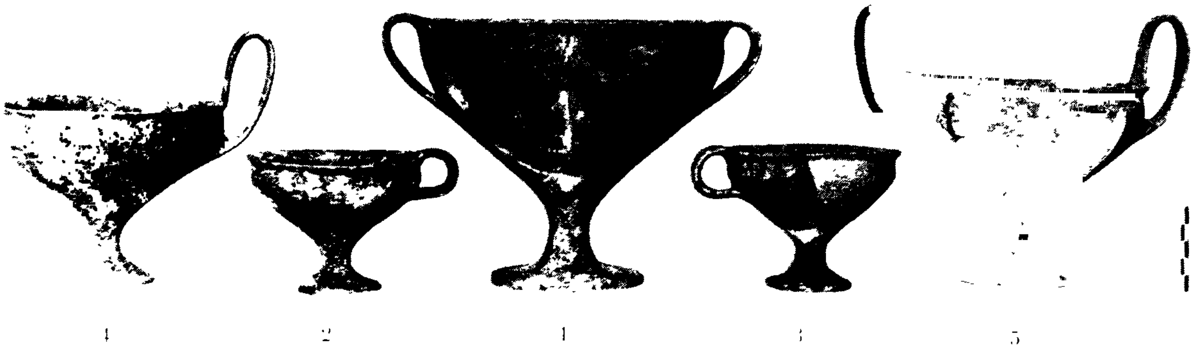


Fig. 103. Stemmed goblets from Shaft II (Nos. 41—45).

42) Stemmed goblet (Fig. 103: 2). H. 7.8 cm., d. 11.0 cm. Spreading foot as in No 41. Low stem. Convex side with faintly angular shoulder and flaring rim. A low loop-handle, springing horizontally from the rim. Greyish-yellow clay with slip as last. Undecorated.

43) Stemmed goblet (Fig. 103: 3). H. 8.0 cm., d. 10.8 cm. Shape, clay, and slip as last.

44) Stemmed goblet with single high swung handle (Fig. 103: 4). H. 10.7 cm., inclusive of handle 15.2 cm., d. 14.0 cm. Bell-shaped foot with concave undersurface. Relatively low stem, the outline of which forms a continuous curve with that of the wall of the bowl. Flaring rim. A high, flattened handle, rising from the rim. Greyish-yellow clay with slip as last. Undecorated.

45) Stemmed goblet with two high handles (Fig. 103: 5). H. 12.6 cm., inclusive of handles 17.0 cm., d. opposite the handles 16.0 cm., in the line of the handles 15.0 cm. Shape as last, but two handles. Greyish-yellow clay with slip as last; undecorated.

46) Alabastron (Fig. 104: 1 a—b). H. 7.5 cm., d. 23.5 cm. Flattened shape. Bottom

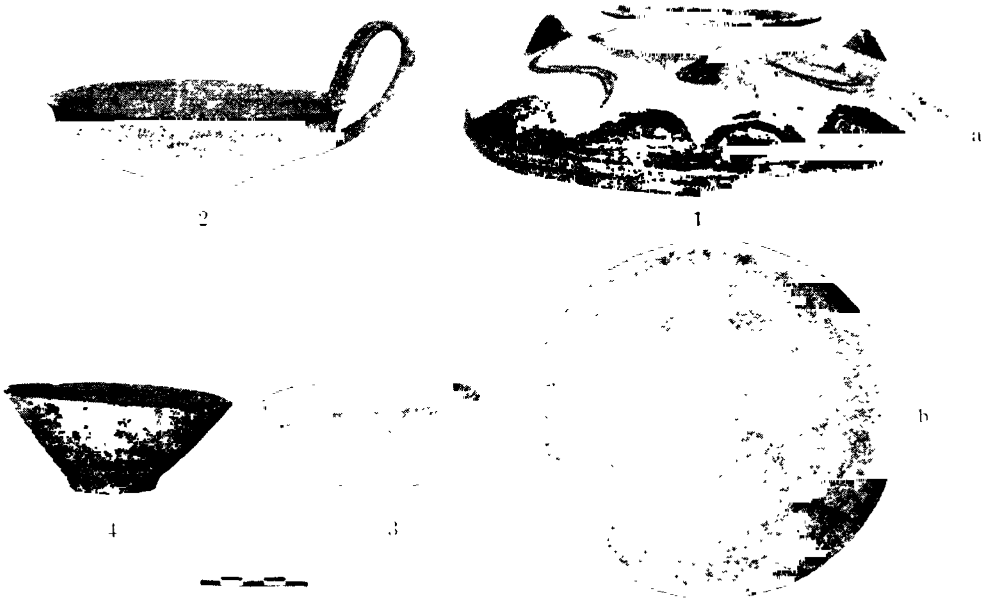


Fig 104 Vases from Shaft II.

1 a, b) Alabastron (No 46)
2) Shallow cup (No 47).
3) Open bowl (No 48).
4) Open bowl (No 49)

decorated with concentric circles, around the centre two, then two halfway to the edge and at the very outer edge two more. On the upper side along the outer edge a wavy line. In the spaces between the three handles large recumbent S-ornaments, 'Laufender Hund'. Handles and rim painted. Yellow, finely cleared clay; brown to black varnish.

47) Shallow cup with one swung handle (Fig. 104: 2). H. 4.2 cm., inclusive of handle 8.0 cm., d. 14.0 cm. Slightly concave base, convex side with flaring rim, from which the flat handle springs. The outer surface is decorated with rings, at the bottom a broad and a narrow, then at half the height of the wall two narrow rings. The rim and the handle are painted. Reddish-yellow, finely settled clay; reddish-brown varnish. — Cf. above No. 13, p. 70 f.

48) Low, open bowl without handles (Fig. 104: 3). H. 4.8 cm., d. 10.4 cm. Flat bottom, obliquely rising side. Reddish clay; undecorated.

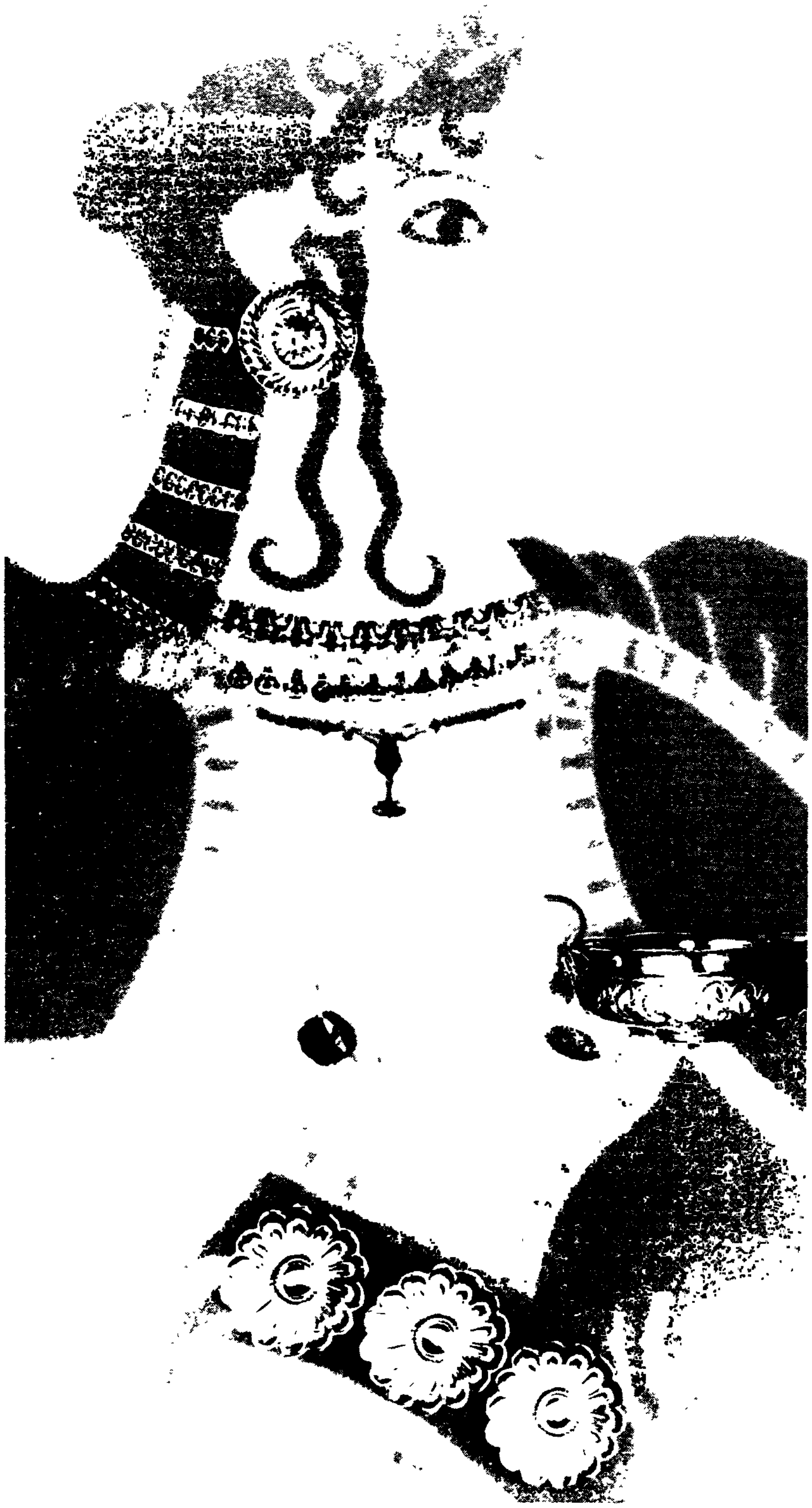


Fig. 105 Golden objects from chamber tomb No. 10 placed upon a female figure on a wall-painting from Thebes

49) Low, open bowl without handles (Fig. 104:4). H. 4.8 cm., d. 10.7 cm. Shape as last. Lighter clay; undecorated.

⁂

The contents of this rich tomb apparently belong to a single burial and are thus to be viewed as a complete find. It is true that the dromos fill as well as the blocking wall in front of the stomion indicate that the tomb was opened once again, but since remains of only one skeleton have been found, it is probable that the tomb had already begun to collapse and was not to be used for a secondary burial. That the tomb was entered on this latter occasion, is indicated by the sherds of the two large vases, Nos. 3 and 4, which were found in the dromos and in the stomion at the lowest level reached on the occasion of the secondary opening of the tomb.

It is possible to believe that the tomb was opened in order to remove the dead to another tomb because of the collapse, as was the case in the chamber tomb discovered at Athens, cf. SHEAR, in *Illustrated London News* 1939, July 22, p. 161. If those who entered the tomb took the trouble of carefully closing it anew, this is no doubt to be ascribed to their still being conscious of the fact that the tomb was a rich and magnificent one — they even took the trouble of encircling the tomb with a special wall at the original level of the ground, no doubt because of the collapse, as intimated above p. 63.

Consequently, the fact that the tomb was used for burial on only one occasion is of the very greatest importance for the dating of the objects found in it. It affords a reliable datum for absolutely fixing the date not only of vases, but also of certain minor finds such as f. inst. glass beads and gems, and it will probably prove to be one of the most reliable bases in chronological matters.

Most of the objects found in this tomb no doubt belong to Late Helladic II, but a number of them should, according to the prevalent conception, be dated to Late Helladic III, especially with regard to the vases described under Nos. 7, 8, 14, 15, 16, and 17. Gems and the most precious vases thus belong to the former period, some of the plainer vases to the latter. The tomb may accordingly be dated to the very first part of Late Helladic III, that is, if dating in an absolute way, to shortly after 1400 B. C.

The similarity in many features which exists between certain finds from our grave and those from the bee-hive tomb and others, especially chamber tomb No. 2, the 'Cenotaph', in the same necropolis is of particular interest. We shall return to this below p. 141 ff.

* * *

The large amount of feminine jewellery together with the complete absence of all weapons in this tomb reveal an unmistakable fact. Some prominent lady — we may be justified in calling her a queen — had, at some time, found her final resting place here. Through the aid of photo-montage, our golden objects have been placed upon a well known female figure on a wall-painting from Thebes (Fig 105). In this way it will be easy to get some conception of the personal wealth of the lady, whose tomb we excavated.

Chamber Tomb No. 11.

Tomb 11 is comparatively small (Fig. 106). The dromos is wedge-shaped and measures 8.30 m. in length. Its width at the outer end is about 0.85 m., at the stomion 1.30 cm.; its depth at the stomion is about 3.20 m. In this tomb there was no blocking wall at the outer end of the dromos, nor was there any inner blocking wall across the whole width of the dromos.

The stomion has a depth of nearly 1 m. and a width of 0.85—1.08 m., widening towards the chamber. Its roof section had caved in, but its height could be estimated at approximately 2 m. The original door packing remained to a height of about 0.95 m., then followed a layer of earth about 0.15 m. deep, and on top of this a secondary door packing about 0.85 m. high (Fig. 107).

The chamber is irregularly rectangular in shape, and its width is greater than its depth, probably because the diggers encountered hard rock that prevented its execution in the normal chamber form. It measures 2.60 × 3.60 m., and its greatest height has been about 2.60 m. The roof seems to have had a vaulted shape. Because of a collapse close by the

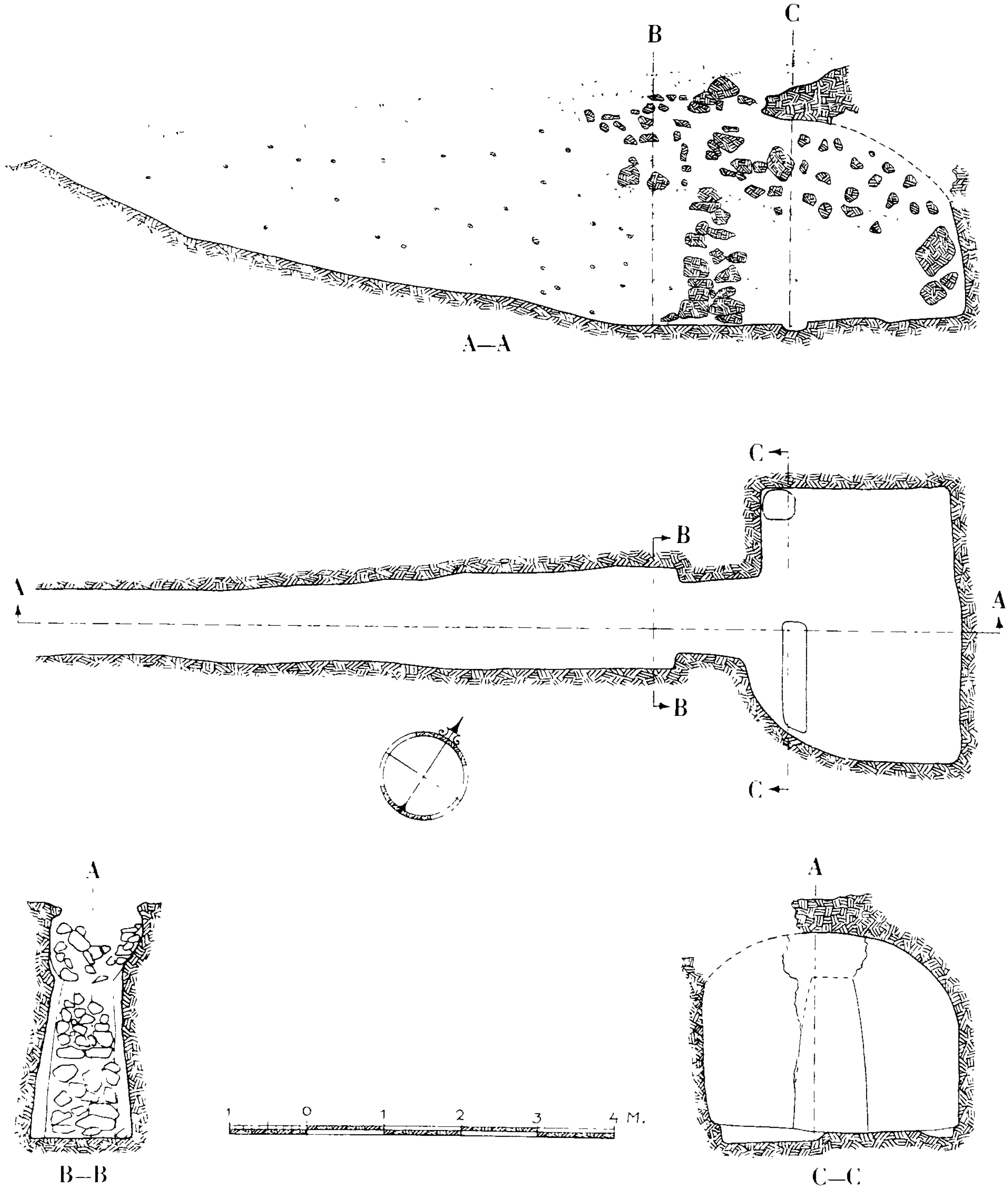


Fig. 106 Plan and sections of chamber tomb No. 11

stomion it was filled with washed-in earth and decomposed rock, and the cavity above was filled with thrown-in stones and earth. In the outer left corner of the chamber a small shaft occurred, 0.40 × 0.40 m., about 0.18 m. deep; in the outer right corner, and partly in front of the stomion another, oblong shaft was situated, about 1.40 × 0.35 m., 0.25 m. deep. Both these shafts have been used as ossuaries. Remains of at least three skeletons were found: one in the outer left corner in and around the small bone shaft, where some pottery was also accumulated; another, the skeleton of a child, in the long shaft, and remains of an older person occurred about the middle of the chamber floor.

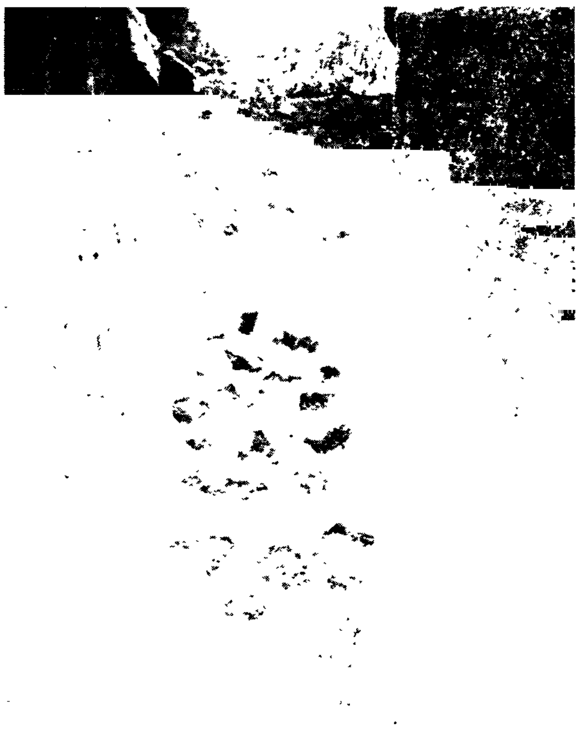


Fig 107 The door packing of chamber tomb No. 11

The door packing in the stomion and the filling in the dromos permitted us to distinguish at least three different phases in the use of the tomb. On the occasion of the first secondary use of the tomb the stomion fill had been partially removed, down to the highest level of the original door packing, and the opening had been extended into the dromos for a distance of about 6 m., as is shown by finds of bronze fragments, etc. When the tomb was again opened an excavation was made down to about the same depth close by the stomion but the opening was extended only 1 ½ m. out into the dromos.

The finds in the tomb permit us to date it to Late Helladic III, a dating which entirely agrees with the type of tomb itself, cf. WACE, *Chamber Tombs*, p. 93.

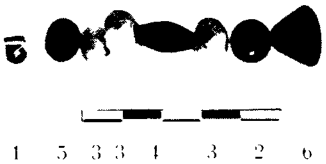


Fig 108 Miscellaneous finds.

1) Pendant spiral of gold (No. 1).
2) Amethyst bead (No 22).
3) Beads of glass paste (No. 23).
4) Faïence bead (No 24)
5) Faïence bead (No 25)
6) Steatite button (No 26)

Finds.

In the dromos.

1) Pendant spiral of gold (Fig. 108: 1). H. 0.8 cm., br. 0.6 cm. Composed of two thin plates of gold, the dorsal plate smooth, the ventral adorned with a pendant spiral *en creux*, and at the top a fluted edge with string-hole. This type, both of gold and glass, is very common in Late Helladic II—III tombs; cf. *Royal Tombs*, p. 40; *Asine*, pp. 371, 400.

2) A great number of bronze fragments, some of them of a double-edged blade, 3 cm. broad, with a strong midrib, others of bronze mountings, one of which has a rivet.

3) Fragments of lead rods, used for dress weights, cf. above p. 50.

4) A large number of Late Helladic sherds, among which a large fragment bears an octopus motif, and the lower half of a female figurine.

From the chamber.

5) Stemmed goblet with two high handles (Fig. 109: 1). H. 21.5 cm., inclusive of handle 28.0 cm., d. 15.0 cm. Broad spreading foot, flat underneath, high stem, convex side with flaring rim, from which the handles rise vertically to join the body in a loop at its middle. Greyish-yellow clay; undecorated.

As to the shape cf. WACE, *Chamber Tombs*, p. 181 f.; BLEGEN, *Prosymna*, p. 432 ff.

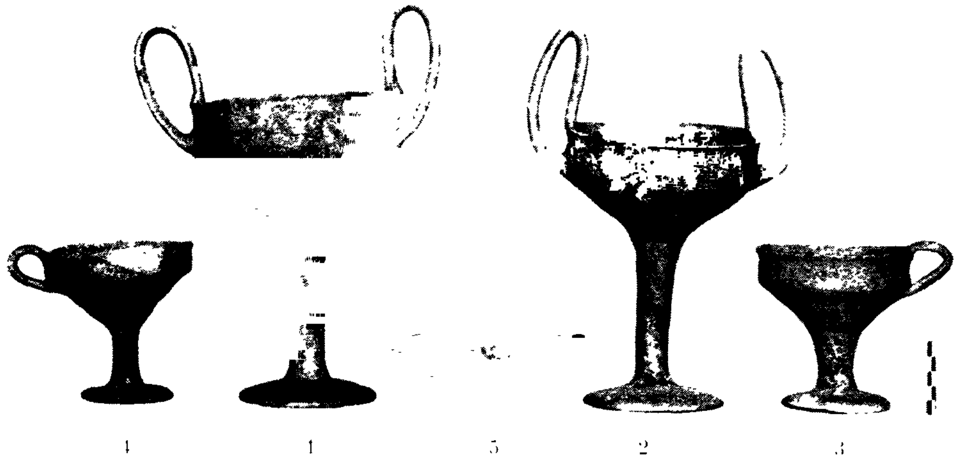


Fig 109 Vases from chamber tomb No 11

1) Stemmed goblet (No 5).
2) Stemmed goblet (No 6)
3) Stemmed goblet (No 7)
4) Stemmed goblet (No 8).
5) Shallow bowl (No. 9)

6) Stemmed goblet with two high handles (Fig. 109: 2). H. 20.0 cm., inclusive of handle 26.7 cm., d. 15.0 cm. Shape as last, but the cup lower and flatter. Handles inclined somewhat inwards. Yellow, finely smoothed ware; undecorated.

7) Stemmed goblet with one low handle (Fig. 109: 3). H. 11.0 cm., d. 11.2 cm. Spreading foot with deep circular countersinking below the relatively low stem. Angular shoulder and flaring rim, from which one small loop-handle springs horizontally and joins the body immediately below the shoulder. Greyish-green ware; undecorated.

8) Stemmed goblet with one low handle (Fig. 109: 4). H. 11.2 cm., d. 10.8 cm. Somewhat warped. Shape as last. Grey ware; undecorated.

9) Shallow bowl with two horizontal ribbon handles immediately below the rim (Fig. 109: 5). H. 4.6 cm., d. 11.2 cm. Somewhat convex side with rounded angle at the shoulder. Reddish clay; undecorated.

For this Mainland shape of vase cf. WACE, *Chamber Tombs*, p. 183; BLEGEN, *Prosymna*, p. 425, "Shallow cups with horizontal 'pinched-out' handles".

10) Alabastron (Fig. 110: 1). Relatively high shape. Fragmentary. H. 10 cm., d. about 20 cm. On the flat bottom a 'wheel'pattern occurs with five pairs of spokes radiating from a circle. At the edge three circles, then a wavy pattern, "switch-back" motive; one of the hills rises towards the neck to a rounded peak in each space between the handles, forming a reversed, drop-shaped vertical projection. The contour lines are followed by a dotted line. A dotted line round the neck. Neck and handles painted. Greyish-green clay; black varnish.

11) Alabastron (Fig. 110: 2). Fragmentary. H. 4.5 cm., d. 11 cm. Two groups of double, concentric circles on the flat bottom; at the edge three circles, then a wavy pattern, "switch-back", from which a lily-shaped flower and heart-shaped leaf with elongated point and double stalk rises towards the mouth in each space between the handles. A dotted line round the neck. Neck and handles painted. Greenish-grey clay; black varnish.

12) Stirrup vase (Fig. 110: 3). H. 9.0 cm., d. 13.5 cm. Low, very flattened shape. The base, the body, and the shoulder close to the handle zone are encircled by broad and narrow rings; in the handle zone groups of concentric, curved lines. A loop connects the bases of the false neck and spout. The handles and mouth are edged with paint. Concentric circles on top of the false neck. Greenish-grey clay; brown varnish.

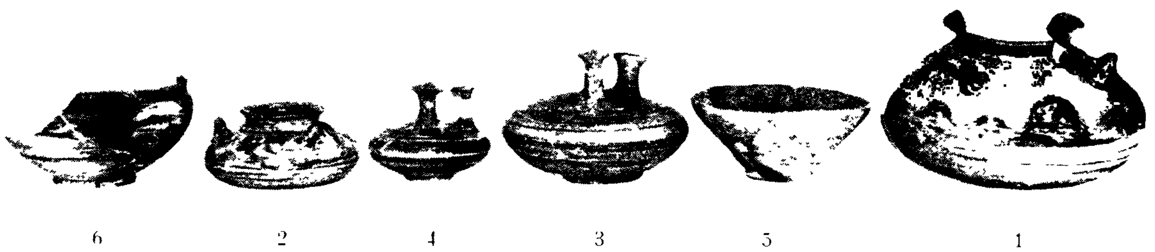


Fig 110. Vases from chamber tomb No. 11.

1) Alabastron (No. 10)
2) Alabastron (No 11).
3) Stirrup vase (No. 12)
4) Stirrup vase (No 13)
5) Open bowl (No 14)
6) Bowl (No. 18).

For the shape cf. Wace, *Chamber Tombs*, p. 169 f.; Blegen, *Prosymna*, p. 451 ff.

13) Stirrup vase (Figs. 110: 4 and 111). H. 6.5 cm., d. 9.0 cm. Shape as last. Foot, body and shoulder close to the handle zone ringed by broader and narrower circles. The handle zone is decorated with curved lines bordering a space, within which short obliquely set strokes rise from the base, and the contours of which are followed by another curved line "kinked" in a deep loop at its apex. A group of chevrons occurs between the two groups opposite the spout. A loop connects the bases of the false neck and spout. The handles and mouth are painted. A plain circle is drawn on top of the false neck.

14) Open bowl (Fig. 110: 5). H. 5.5 cm., d. 12.3 cm. Conical. Yellow clay; undecorated.

15) Fragments of two small, similar bowls of red clay.

16) Stemmed goblet. Foot missing. Somewhat flattened. D. 12 cm. Angular shoulder. One low handle. Green clay; undecorated.

17) Stemmed goblet (half the bowl missing). Preserved h. 7.5 cm., d. 14 cm. Convex side. The cup completely painted inside. Greenish-yellow clay; black varnish.

18) Fragment of bowl with two horizontal handles (Fig. 110: 6). H. 7.5 cm., d. about 15 cm. Low, typically 'geometric' shape with convex side and vertically rising rim. Low foot. Covered inside and out with black glaze paint, partially worn off. Yellowish-green ware.

Miscellaneous finds.

19) Arm-chair of terracotta with small sitting figure (Fig. 112: 1). H. 7.3 cm., br. 7.0 cm. Arm-chair with rounded back and with open-work side-supports, in which a thin figure with typical idol face and flattened head-covering sits pasted to the seat and the back. The chair has only three legs which continue as three vertical supports joined by two horizontal, curved bands of clay, forming the back and the arms of the chair. The vertical supports end in small spirals. The decoration with the exception of a smear of paint down each leg is confined to stripes on the seat and horizontal supports.

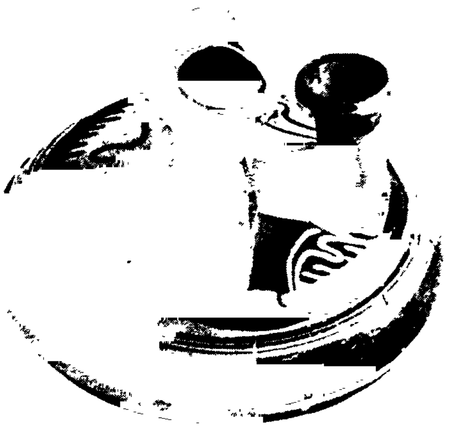


Fig 111 Stirrup vase (No. 13)

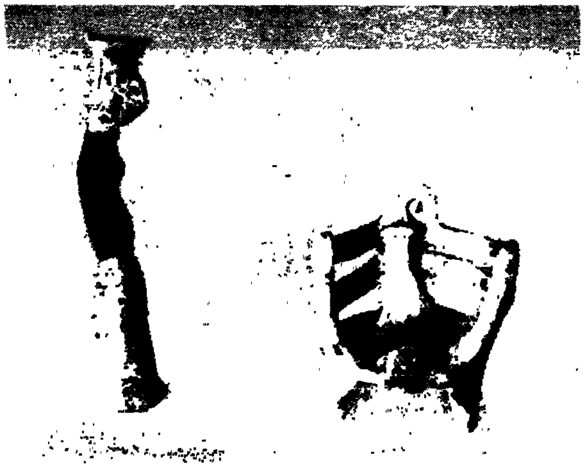


Fig 112 Figurines of terracotta
1) Arm-chair with sitting figure (No 19)
2) Figurine with hollow stem (No 20)

A similar enthroned figure was found by us in a tomb, as yet unpublished, at Berbati, reproduced in BOSSERT, *Alt-Kreta*³, p. 50, fig. 83 c. Cf. besides NILSSON, *Minoan-Mycenaean Religion*, p. 262, who gives a list of chairs with or without a seated figure, and a later find from tomb No. 3 at Dendra, *Royal Tombs*, p. 88. As to different types of chairs, cf. KULCZYCKI, G., *Die Möbelformen des Ägäischen Kulturkreises*, in *Eos* XXXIII, XXXIV, Lwów 1931, 1934, and BLEGEN's publication on the chair found by Sir CHARLES WALSTON in the Argive Heraeum, *Prosymna*, p. 366 f., Figs. 136 and 619.

20) The lower part of two other figurines, one with a solid columnar stem with spread-

ing foot, the other with a hollow stem (Fig. 112: 2); the former of yellow, the latter of greenish clay. The head of the latter, with pinched-out face and a circular hat, concave on top, and with a plastic braid of hair, was also found.

For the figurines, cf. above p. 33.

21) Basal portion of steatite lamp. Preserved h. 3 cm., d. 8.5 cm.

22) Short bead of amethyst, oblately circular in shape (Fig. 108: 2). D. 1.1 cm., along the string-hole 0.8 cm.

For amethyst beads cf. above pp. 29, 49.

23) 3 short beads of glass paste, oblately circular in shape with very large string-holes (Fig. 108: 3). D. 1.3—1.0 cm., along string-hole 0.8 cm. Milk-coloured.

24) 1 long gadrooned bead of faïence, quadrilateral in section (Fig. 108: 4). L. 1.7 cm., br. 0.6 cm. Black.

25) 1 spherical bead of faience (Fig. 108: 5). D. 1.0 cm. Black.

26) 1 conical button of steatite (Fig. 108: 6). D. 1.6 cm., h. along the string-hole 1.1 cm. Smooth undersurface.

27) Fragments of bronze mounting and of an edged bronze implement, in addition to pieces of lead wire; cf. finds from the dromos.

⁂

The finds were mainly found in three accumulations in the chamber associated with the three skeletons we were able to determine, and their presence agrees with the observations regarding the use of the tomb on three different occasions made upon an examination of the filling of the dromos. The following objects found in the inner left corner above and in the small shaft situated there, belong to group I· Nos. 7, 10, 12, 13, 14, 18, 21, 24, 25, and 26. In group II in the long shaft immediately in front of the door and in part above it were found Nos. 5, 8, 9, 11, 16, and 17. Group III, which occurred at the inner left wall of the chamber along its right section, includes Nos. 6, 19, and 23.

The contents of the tomb in their entirety are typical of Late Helladic III tombs — as is also the very shape of the tomb. True enough, the amethyst bead might indicate that the tomb began to be used during Late Helladic II, cf. WACE's dating of amethyst beads, *Chamber Tombs*, p. 208, but BLEGEN has found similar beads in tombs from the Third Late Helladic stage in the Argive Heraeum, cf. *Prosymna*, p. 292. The terracotta figurines, as well as the shapes of the vases, even indicate a relatively late stage of this epoch. The bowl No. 18 shows that the tomb was in use as late as toward the beginning of the Geometric period.

III. Some remarks concerning the finds.

CERTAIN observations to which the finds have given rise are included under this heading — excursions which exceed a purely descriptive account of the excavation results — together with a more detailed interpretation of several of the finds and additional comments concerning them. The sequence of these separate studies has been determined by the finds themselves: they are dealt with in the order in which they appeared during the excavations.

1. Minoan-Mycenaean lamps.

It was long believed that the use of lamps was unknown in Greece in pre-historic times, the grounds for this belief lying in the fact that according to Homer torches and braziers, *λαμπτῆρες*, were the source of artificial lighting, giving at once light and heat, though man was ususally more dependant on the fire on the hearth for these comforts. The excavations, however, have proved that a system of lighting existed in the Mycenaean age equal to that of classical times. Attention was first drawn to this fact by those large stone lamps, which, above all, have been found in Mycenaean tombs. This is a type of lamp wholly different from, and more developed than, that of which Herodotos, II: 62 speaks as characteristic of Egypt, where the use of lamps no doubt originated. The Egyptian lamps, according to Herodotos, were flat saucers filled with a mixture of oil and salt, on the top of which the wick floated. Such saucers, often with infolded rim giving them a shell-like appearance, were later diffused by the Phoenicians to all the territories which they colonized in the Mediterranean area[1]. As regards the fuel employed we have to reckon with olive-oil and in the case of Egypt also with oil from the plant that the Greeks call *κρότων*, the Egyptians *κίκι*, according to Herodotos II: 94[2]. It is also possible that fat was burned in the Mycenaean lamps — TSOUNTAS-MANATT, *The Mycenaean Age*, p. 80, are even of the opinion that this was the only combustible in use, but this seems improbable to me, since we now know that the growing of olives apparently played a great rôle in prehistoric times[3].

Those lamps of the Mycenaean age which have so far been taken into account, are, however, more or less luxury articles, of stone or bronze. Hitherto only a small number of clay lamps, imitations of stone types, are listed in the literature, and a specialist in this subject such as BRONEER says: "In the Mycenaean age clay lamps were rare and large stone lamps with flat top and two or four wicks were used" [1]. It is true that one or several such stone lamps are found in most of the richly furnished Mycenaean tombs, but in poor tombs they are entirely lacking, and I have long wondered whether a simpler counterpart could not have been employed from among the household utensils in these less richly furnished tombs. I now believe that this is to be found in the so-called 'ladles' or 'scoops' of coarse, red clay, that are such a recurrent feature in these very tombs; cf. above pp. 24, 29.

---

[1] Cf. f. inst. H. OTTO, *Studien zur Keramik der mittleren Bronzezeit in Palästina*, in *Zeitschrift des Deutschen Palästinavereins* 61, 1938, p. 147 ff., Taf. 22.

[2] Concerning the use of croton oil for purposes of illumination, cf. DAWSON, *Castor-oil in Antiquity*, in *Aegyptus* X, 1929, p. 57 ff.

[3] Cf. EVANS, *Palace of Minos*, II, p. 54, and as to the extent of cultivation in Crete according to the evidence of the writing tablets, *ib.*, IV, p. 716 ff.

The ladle or scoop is a type of vessel common both in tombs and on sites — cf. f. inst. BLEGEN, *Zygouries*, p. 159 ff. Blegen found no less than 10 specimens in the Potter's shop. The shallow cups or bowls, with a slight groove or hollow in the rim, have at the opposite side a heavy, projecting leg handle. Personally I cannot accept this vessel as a scoop. If the groove had actually served as a channel for pouring, it would no doubt have been placed at right angles to the handle as on some shallow saucers, and *not opposite* to it. On the other hand, if we regard this vessel-type as a lamp, the channel for the wick is in the correct position in being placed as far as possible from the handle. The handle is often bent downward so that its end reaches the same level as that of the base of the bowl, as BLEGEN correctly states, *Zygouries*, p. 161, and thus acts as a sturdy support, which enables the lamp when set down to stand without leaning (Fig. 113: 12). Together with these vessels BLEGEN found another that he, *ib.*, p. 161, describes in the following manner: "This is peculiar in that it has, on the interior opposite the handle, a heavy crossbar, forming a rather flat loop, which may have been used for suspending the vessel by a string (!), but looks startlingly like the device in "moustache cups" of mid-nineteenth century crockery" — illustrated in BLEGEN, *ib.*, p. 154, fig. 145, No. 187 (Fig. 113: 11). In reality we have here another type of lamp with crossbar instead of groove for the purpose of keeping the wick in position.

BLEGEN's explanation that these vessels were used as scoops or ladles for scooping or pouring liquids has obviously not satisfied WACE who, true enough, retains their designation, cf. *Chamber Tombs*, p. 184, but offers the following explanation: "Such ladles were probably used for carrying glowing charcoal into a tomb to fumigate it when it was being prepared for another interment.". True, his explanation shows regard for the fact that many of these vessels are more or less damaged by fire, but it disregards the groove in the rim, which is entirely superfluous if they were used for fumigation.

That, in reality, these objetcs are nothing more nor less than lamps is proved by the fact that we possess models of bronze, found in several tombs at Dendra, one specimen from tomb No. 8, cf. above, p. 45, No. 12 (Fig. 49: 1), and two specimens from tomb No. 2, cf. *Royal Tombs*, p. 94 f., Nos. 11 and 13, Pl. XXXII: 4 (Fig. 113: 9). These, in their turn, are rude imitations of the elegant type of bronze lamp represented by one specimen in the same tomb No. 2, cf. *Royal Tombs*, p. 94, No. 12, Pl. XXXII: 4, in the middle, a type that was previously known from the "Tomb of Tripod Hearth" at Knossos, cf. EVANS, *Prehistoric Tombs of Knossos*, in *Archaeologia* LIX, p. 430, fig. 35 a (Fig. 113: 10). This latter example has a chain, attached to a knob at the base of the handle, consisting of three long links ending in a loop, from which doubtless hung some kind of trimmer for the wick. The hole for the knob also exists in the corresponding position on the pendant lamp from tomb 2 at Dendra and the knob at the base of the handle is still *in situ* on one of the coarser lamps from the same site, which form the closest parallels to the "ladle or scoop". The knob or hole is lacking on the two other specimens, one from tomb No. 2, and one from tomb No. 8, but a chain may possibly have been attached to the long handle. In those instances where there is a large vertical hole through the end of the handle of the clay scoops, this hole need not necessarily, as BLEGEN, *Zygouries*, p. 161, maintains, have been intended for suspension from a nail or peg, but may also be conceived as a hole serving to fasten a string with a trimmer for the wick.

---

[1] cf BRONEER, *Terracotta Lamps*, p 5, in *Corinth*, IV: 2.

Thus in having determined that the "ladle or scoop" was used as a lamp — it may be called the 'scoop-lamp' —, we have established the fact that there existed in the poorer tombs a feature corresponding to the stone and bronze lamps of the richer ones. It is all the more astonishing that this was not realized earlier, since we have long had models of this new type of lamp recognized from numerous examples in Crete both in clay and stone. As far as I know there exists no comprehensive account of prehistoric lamp types from the Aegean culture area, and I shall therefore take this opportunity of appending a brief survey of the main types — though a further systematic treatment of the material is desirable.

I wish to premise that a large number of those simple vases or handleless cups, which were certainly used as cups, were also utilized as lamps with floating wicks — I have myself had experience in Greece of a nightlamp consisting of a glass, half filled with water, on the top of which rested a layer of oil with a floating wick inserted in a cork. I am therefore most inclined to regard quite simply as lamps those shallow bowls and "incense burners" containing carbonized olive grains and charcoal material, which EVANS found in such great numbers in the underground spring-chamber of the 'Caravanserai' together with "a pile of steatite lamps", cf. *Palace of Minos*, II, p. 123 ff. The votive cups arranged in regular rows round the pillar of a crypt belonging to a private house on the hill of Gypsades at Knossos, bottom upwards over small heaps of grey earth, cf. *ib.*, p. 548, fig. 348 (Fig. 113: 3), I also regard as having most probably been used as lamps — in both instances it is a question of underground chambers or crypts lacking all means of natural lighting. In Egypt the same 'cup-lamp' was in use as is clearly evidenced by hieroglyphs (Fig. 113: 1—2)[1]. Beside this cup-lamp, certainly in frequent use during the whole Bronze Age, a true lamp form was developed in Crete as early as the Early Minoan period with a leg-handle at the upper edge of the cup. That is the typological genesis of the 'ladle- or scoop-lamps', to be found in the most primitive shape among the earliest lamps of Crete, cf. f. inst. XANTHOUDIDES, *The Vaulted Tombs of Mesará*, Pl. 22, Nos. 740—745 (Fig. 113: 4).

A. *Hand-lamps.*

The typical lamp in Crete in Early and Middle Minoan times is a hand-lamp with an open flat-bottomed bowl for the oil with a deep incision in the rim to provide a holder for

[1] GARDINER, *Egyptian Grammar*, Sign-list R 7, p. 489, and Sign-list Aa 1, p. 524

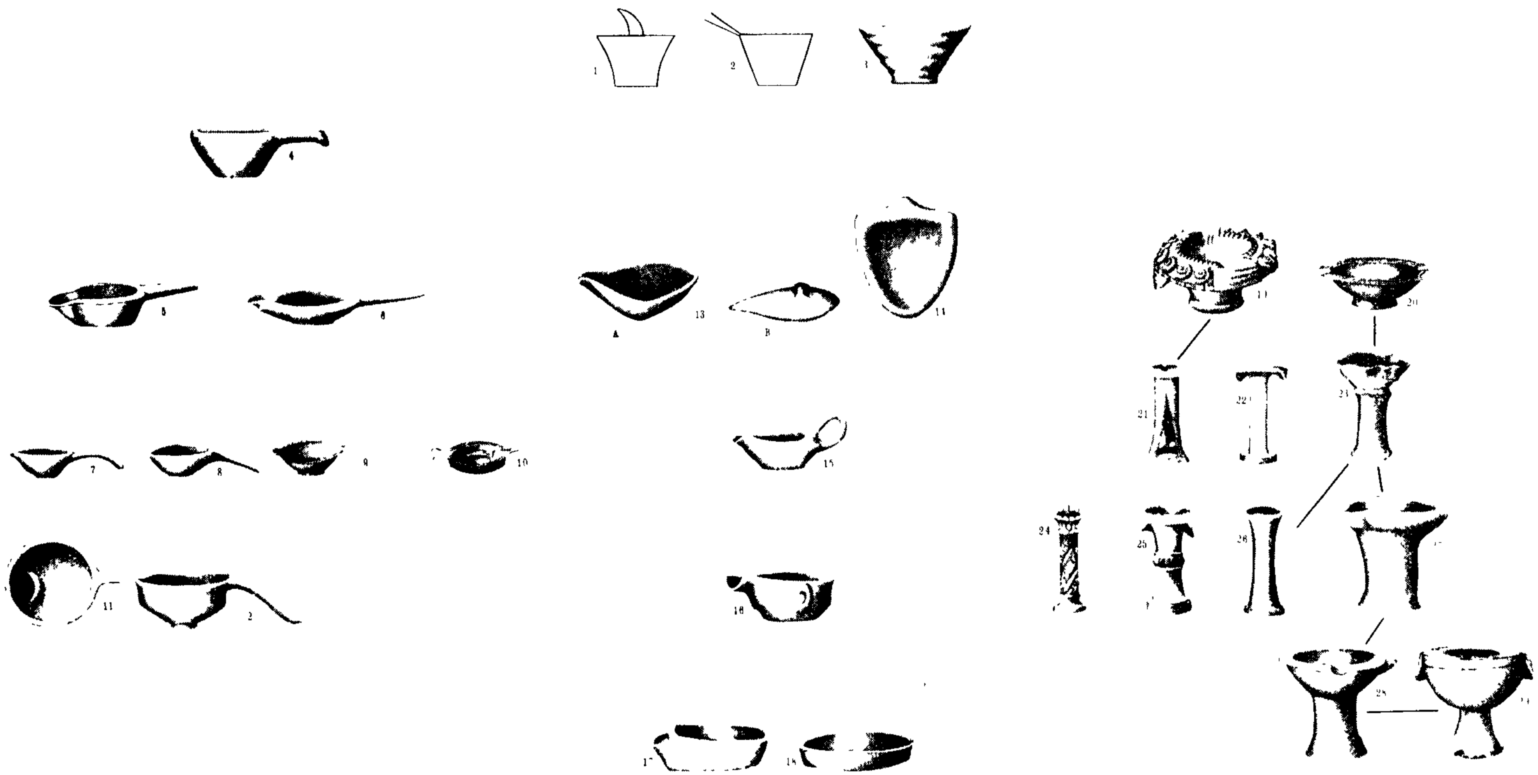


Fig 113. Minoan-Mycenaean lamps.

1—2 Egyptian hieroglyphs
3 Cup-lamp (clay)
4 Handled cup (stone).
5–6 Hand-lamps (clay)
7—8 Hand-lamps (clay).
9—10 Hand-lamps (bronze).
11—12 Typical scoop-lamps (clay)

13. Lamp without handle but with lid (stone)
14. Triangular lamp without handle (stone).
15. Lamp with loop handle (clay).
16 Upright handle on side-spouted bowl (clay)
17 Lamp with bridged spout (clay)
18 Bronze 'pan'.
19 Low 'stand'-lamp (stone).

20 Low 'stand'-lamp (clay)
21 Stand (clay) with lamp (stone)
22. Stand (stone).
23 Stand (clay) with lamp (clay)
24—25. Pedestal lamps (stone)
26—28 Pedestal lamps (clay).
29. Pedestal lamp (stone)

the wick, or alternatively the arrangement for the wick is formed by bending the rim outwards. The most marked differences between the several sub-varieties occur in the shape of the handle or eventually the lack of handle.

1) Horizontal stick handle opposite the bed for the wick convenient both for carrying the lamp and for fastening it between the wall stones. Early Minoan examples from Hagia Eirene by XANTHOUDIDES, *The vaulted tombs of Mesará*, p. 52 f., Pl. 36, Nos. 5015, 5020; from Porti, *ib.*, p. 63, Pl. 37, Nos. 5091—93 (Fig. 113: 5); with arched horizontal handle from Christós, *ib.*, p. 71; Middle Minoan specimens from Porti, *ib.*, p. 63; Mochlos, SEAGER, *Explorations in the island of Mochlos*, p. 57, No. VIII *a*, fig. 46; Palaikastro, *BSA*, Suppl. *Pap.* I, p. 129 f., Pl. 28 A, B; Dictean Cave, *BSA* VI, p. 105; Phylakopi, *Excavations*, pp. 137, 210, Pl. 25: 7; Vaphio, *Ephemeris Archaiologiki* 1889, p. 146, Pl. 7: 13 (Fig. 113: 6). These include both clay and stone lamps, not always correctly designated by XANTHOUDIDES, cf. f. inst. *Vaulted Tombs*, p. 19, Pl. 23, No. 725. It is this type that survives in the bronze lamp mentioned above and in the scoop-lamps.

As regards the scoop-lamp attention may be drawn to the fact that we have one specimen in, f. inst., tomb I: 1 at Asine, cf. *Asine*, p. 370, fig. 240, No. 66 (Fig. 113: 8), which may be said to constitute the connecting link between the older lamp with a stick-handle and the ordinary scoop-lamp with arched handle, met with for example in Zygouries.

2) Large loop handle from the rim opposite the bed for the wick: Porti, XANTHOUDIDES, *op. c.*, p. 63, Pl. 37, No. 5090 (Fig. 113: 15); Zakró, *BSA* VII, p. 128 f., fig. 41; Gournia, BOYD-HAWES, p. 30, Pl. 2; Chamaízi, *Ephemeris Archaiologiki* 1906, p. 149, Pl. 10; Palaikastro, *BSA*, *Suppl. Pap.* I, p. 129 f., Pl. 28, C—G; Petrás, *BSA* VIII, p. 285, fig. 4. These lamps belong to Middle and Late Minoan.

3) Upright handle on the side-spouted bowl: Koumása, XANTHOUDIDES, *op. c.*, p. 14, Pl. 20, Nos. 4170, 4171 (Fig. 113: 16). Early Minoan.

4) Without handle, elongated shape with single bed for the wick: Koumása, *ib.*, p. 46, Pl. 31, Nos. 719, 737, 692 *a* and lids for such lamps, *ib.* 693 (Fig. 113: 13 A—B); Chamaízi, *Ephemeris Archaiologiki* 1906, p. 149, Pl. 10; Phaestos, *Monumenti Antichi* XIV, p. 482, fig. 88. Middle Minoan.

5) Without handle, triangular shape (Fig. 113: 14). EVANS, *Palace of Minos*, I, p. 624 f., has designated lamps of this type as 'ladle-shaped vessels'. All bear evidence of having been scorched by intense heat, two have inscriptions and were found in shrines belonging to Middle Minoan III culture levels. Cf. also Phylakopi, *Excavations*, s. 211, fig. 187.

6) A single lamp without handle, but with bridged spout, from Asine, cf. *Asine*, p. 307, fig. 213: 8 (Fig. 113: 17). It was found in a Mycenaean stratum and is, it seems, especially to be compared with a single-piece such as that from Phylakopi, cf. *Phylakopi*, p. 211, fig. 187.

7) Small bronze vessels in the shape of a pan with bent rim without groove and a handle sloping upwards (Fig. 113: 18). *Royal Tombs*, p. 95. I have suggested that these vessels were lamps in consideration of the fact that similar lamps of iron are still used in

Greek villages. They have been variously interpreted as paint-warmers or frying pans, cf. *Royal Tombs*, where the occurrence of this type is referred to in Crete as well as on the Mainland, though it is limited in time to Late Minoan and Late Helladic.

B. *"Stand"-lamps.*

I. *Low lamp* with shallow bowl, developed from the cup-lamp, but with two or more spout-like openings for wicks, often with pendant projections between the channels, placed under the bowl as handles in order to facilitate its carrying when lighted (Fig. 113:19). It is made of steatite or other stone commonly employed in the Aegean region during the later Bronze Age. Cf. f. inst. from Knossos: 'Caravanserai', EVANS, *Palace of Minos*, II, p. 123 f., fig. 59; basement near Stepped Portico, *ib.*, p. 633, fig. 395, Palaikastro, *BSA*, *Suppl. Pap.* I, p. 138 ff., Phylakopi, *Excavations*, p. 209 f. We have found such lamps in the bee-hive tomb at Dendra, cf. *Royal Tombs*, p. 37 f., fig. 23; chamber tomb No. 2, 2 examples, *ib.*, p. 101, fig. 78; tomb No. 11 cf. above p. 101; in Asine in Tomb I: 2, cf. *Asine*, p. 378; Tomb I: 7, *ib.*, p. 407. This lamp, no doubt often imported ready-made — steatite is indigenous to Crete —, appears on the Mainland, as far as I have been able to ascertain, not earlier than Late Helladic II.

A clay imitation of this type of lamp (Fig. 113: 20) also occurs in Crete in the Vat Room Deposit at Knossos, dated to Middle Minoan I, cf. EVANS, *Palace of Minos*, I, p. 168, fig. 118 a, No. 12; Gournia, BOYD-HAWES, p. 30, Pl. 2; Palaikastro, *BSA*, *Suppl. Pap.* I, Pl. 28 K; on the Mainland in Vaphio, *Ephemeris Archaiologiki* 1889, Pl. 7, No. 20; Argive Heraeum, BLEGEN, *Prosymna*, p. 455, fig. 535; Mycenae, WACE, *Chamber Tombs*, p. 164, Pl. 43, dated to Late Helladic II; in Phylakopi, *Excavations*, p. 209 f., Pl. 41.

Lamps of this kind were undoubtedly intended to be placed on some kind of stand. Such supports, both of stone and of clay (Fig. 113: 21—23), have also been found f. inst. in Phylakopi, cf. *Excavations*, p. 210 and in Palaikastro, cf. *BSA*. *Suppl. Pap.*, I, p. 139, fig. 120. The support of clay is a sort of tripod, open at the top with slit sides. In spite of the objections made, I feel tempted to accept the view suggested by Miss WILLIAMS, *Gournia*, p. 48, that the tub-shaped vessels found at Gournia, Prinia, Koumasa and elsewhere which have given rise to many hypotheses, cf. NILSSON, *Minoan-Mycenaean Religion*, p. 271 ff., are merely stands for other vessels without feet, or lamps. Miss WILLIAMS compares them with the Egyptian so-called offering stands. In my opinion they are forerunners of the bronze tripods, which during the later Bronze Age reach the Aegean region from the East, cf. HALL, *Excavations in Eastern Crete, Vrokastro*, p. 132 ff., Pl. 34, and examples there mentioned, to which he, however, probably assigns too late a date in view of the find of a tripod in Tiryns, cf. KARO, *Schatz von Tiryns*, in *Ath. Mitt.* LV, 1930, p. 131 ff., fig. 4 and Pl. XXXIII; with respect to Cyprus cf. GJERSTAD, *Studies in prehistoric Cyprus*, p. 238.

Whatever the truth may be as regards these tub-vessels, it is certain that lamps of the kind just described were sometimes placed on stands, an arrangement which leads us to the next main type.

II. *Pedestal lamp.* This type differs from the last in that the stand is made in one piece with the round lamp of the form just described. Lamps of this kind have been found throughout the Aegean culture area. The oldest are from Knossos, where EVANS, *Palace of Minos*, II, p. 298 ff., came across 8 examples in a workshop, where lamps were manufactured, in the 'House of the Fallen Blocks', dated to Middle Minoan III. From the same period an example occurs in the South East House in the pillar crypt, cf. *ib.*, I, p. 344 f. (Fig. 113: 24) and another comes from the Royal Villa, cf. *ib.*, II, p. 404, these two being of gypsum. Cf. also Palaikastro, *BSA. Suppl. Pap.* I, p. 138, figs. 119, 121, here, however, of Late Minoan date. Numerous examples have been found on the Mainland. In Dendra we have a specimen from chamber tomb No. 2, cf. *Royal Tombs*, p. 101, No. 5, fig. 77, another from tomb 8, cf. above p. 57, fig. 64. The type is also to be met with in the islands e.g. in Phylakopi, cf. *Excavations.* p. 210, fig. 186 (Fig. 113: 25). — As regards this lamp type, too, it holds true that it cannot be dated on the Mainland with certainty higher than Late Helladic II.

These large stemmed stone lamps may have developed under the influence of a clay form which is already met with as early as Middle Minoan. It has a very shallow oil bowl with two opposite incisions in the rim for wicks, the bowl resting on a high cylindrical stem, widening at the base. XANTHOUDIDES has found several similar examples in the vaulted tombs of Mesará, one in Porti, cf. *Vaulted Tombs*, p. 63, Pl. 37, No. 5094 (Fig. 113: 28), one from Platanos, *ib.*, p. 97, Pl. 51, No. 6905 (Fig. 113: 27). The same type has also been found at Palaikastro, cf. *BSA. Suppl. Pap.* I, p. 130, Pl. 28, *I. J.* (Fig. 113: 26), but is there dated to Late Minoan.

* * *

It is easy to explain the occurrence of lamps in great numbers in the Mycenaean chamber tombs. A careful examination of the filling of the dromos and the stomion has shown that only a hole sufficient for entering the chamber and for carrying in the body of the dead was opened at secondary burial. It is evident that under such circumstances any illumination of the chamber must have been effected by artificial light. Since numerous examples of costly lamps of stone and bronze have been found, but hitherto only a few clay imitations of stone lamps, we had to look more carefully for another lamp-type — now identified in the scoop- and cup-lamps.

The lamp, like so many other products of the Minoan-Mycenaean civilization, disappears, significantly enough, during the cultural twilight of the Geometric Period, and Athenaios XV, p. 700 *e*, can therefore say: *οὐ παλαιὸν εὕρημα λύχνος* in referring to the classical civilization which certainly borrowed it from the Orient, cf. PFUHL, *Zur Geschichte der griechischen Lampen und Laternen*, in *Arch. Jahrb.* 1912, p. 56. In Homer a lamp is mentioned only in one place, namely Od. XIX: 34, where it is related that Pallas Athena, *χρύσεον λύχνον ἔχουσα*, provided light for Odysseus and Telemachos when they made preparations for murdering the suitors. We are not justified in regarding this as an anachronism as MONRO does in commenting on this passage: "*λύχνος* is post-Homeric, both word and thing", nor can we accept AMEIS-HENTZE's interpretation: "*χρύσεον λύχνον* — als eine Fackel mit goldener Hülse zu denken". In bronze lamps of the type described above, cf. fig. 113: 10, we have to recognize the model of Athena's lamp — it belonged to a goddess and, consequently, it must be of the most precious material. This is, however, the only place, where the lamp of the Mycenaean age is recorded. And it is significant that the artifical light in which Homer shows his heroes in other places, is shed by the fire on the hearth, by torches or by braziers, which, however, glowed by the burning of dry wood, as is described in Od. XVIII, 307 ff., XIX, 63 f. The firstmentioned passage reveals how the suitors amuse themselves in Odysseu's palace, when night is falling:

> *αὐτίκα λαμπτῆρας τρεῖς ἵστασαν ἐν μεγάροισιν,*
> *ὄφρα φαείνοιεν· περὶ δὲ ξύλα κάγκανα θῆκαν,*
> *αὖα πάλαι, περίκηλα, νέον κεκεασμένα χαλκῷ,*
> *καὶ δαΐδας μετέμισγον· ἀμοιβηδὶς δ᾽ ἀνέφαινον*
> *δμῳαὶ Ὀδυσσῆος ταλασίφρονος . . .*

In the latter passage it is said of the attendant maidens of Penelope:

> *πῦρ δ᾽ ἀπὸ λαμπτήρων χαμάδις βάλον, ἄλλα δ᾽ ἐπ᾽ αὐτῶν*
> *νήησαν ξύλα πολλά, φόως ἔμεν ἠδὲ θέρεσθαι.*

Of these *λαμπτῆρες*, whose chief function, as their name shows, was to shed light, there is also a counterpart in the so-called braziers of the Mycenaean Age, which may well have been used also for transporting glowing embers in connection with the fumigation of the tombs, cf. the tripod brazier above p. 28 (Fig. 28: 2) and *B. M. Cat. of Vases*, I, 1, p. 139 ff. Note that the other type of brazier with small body and wide outspread rim and handle, cf. WACE, *Chamber Tombs*, p. 151, Pl. XLIV, tomb 518, No. 45, EVANS, *Tomb of the Double Axes*, in *Archaeologia* LXV, p. 28 f., fig. 38, 39, also found in Zygouries together with the scoop-lamps, cf. BLEGEN, *Zygouries*, p. 161, fig. 156, is well suited for this twofold purpose. The charred remains that EVANS found in such a brazier in Chamber Tomb 32, cf. *Prehistoric Tombs of Knossos*, in *Archaeologia* LIX, p. 439 f., fig. 46, do not in any way refute the supposition that they, too, were portable lamps for the burning of resinous sticks.

It may well be asked what caused the disappearance of the true lamp with the downfall of the Minoan-Mycenaean civilization. One can of course point to the fact that the immigrants from the North were accustomed to use fir-sticks and chips for lighting, but since it is impossible to believe that a complete extermination of the older population occurred, this does not suffice in explaining the disappearance of the previous use of oil-lamps which, as we have seen, was particularly widespread. The explanation most readily acceptable is that the old olive plantations were so badly devastated [1] and the general cultivation of the olive had declined to such an extent that oil became too expensive for use as a combustible — indeed, Homer nowhere states that olive oil was used for such a purpose. And any importation of oil from abroad for this purpose during the period of great uppheavals, i. e. during the Dorian migrations, is, to say the least, highly improbable. The disappearance of the oil lamp might thus be interpreted as an indication of a general decline of agriculture and especially of olive cultivation at this time — a decline that we, even without definite proof, are justified in taking into account in connection with the simultaneous and general decline of civilization.

However, it is perhaps erroneous to make the devastating Dorians wholly responsible for the decline of the oil production. The olive tree is extremely sensitive to climatic conditions and is generally considered the most typical plant of the Mediterranean Flora [2]. It is sensitive to rain only in so far that the precipitation and the atmospheric humidity must not exceed a certain measure. More important are the conditions relating to temperature. The fruit needs a rather high, dry heat for its development — the higher the temperature the greater the quantity of oil produced — especially in winter. The winter temperature determines the northernmost latitude at which the olive tree will grow. Mild winters and dry, warm summers are its most important climatic requisites. The amount of heat needed for the full ripening of the fruit is thus great, in so far as seven whole months elapse between florification and maturity, all of which must have a considerably high mean temperature. Since the olive tree belongs to the evergreens and in addition has a high stem, it also requires in winter, its resting period, a great degree of warmth, even though it is difficult to determine the temperature, at which the olive tree is blighted. Incidental circumstances play a great rôle — whether the tree is in vegetation or not, whether it is not only cold, but humid as well, whether it becomes cold suddenly or gradually. A temperature of 8° C. below zero is sufficient to destroy it, if the sap has begun to rise and the frost sets in after rain, or if melting snow has already thoroughly moistened and chilled it. By alternate melting of snow and frost it is blighted even when it is less cold.

Snowfalls are, on the whole, very injurious to olive trees, at least if the snow remains on the branches for some time. In the island of Chios the olive trees died in the winter of 1849/50 at — 9°, at Smyrna at — 11° C.

That such conditions were also experienced occasionally during the classical period, one may infer from the interest in the olive tree on the part of the classical authors. Herodotos V: 82 claims that there was a time, and not a very remote one at that, when olive trees existed only in Athens, and legend has much to tell about the sanctity of the olive tree, Athena's sacred tree, which she, in competition with Poseidon, caused to shoot forth on the Acropolis.

---

[1] Cf. FISCHER, TH., *Der Ölbaum*, in *Petermanns Mitteilungen*, Ergbd XXXI (1904), Nr 147, p 2: "In solchem Masse ist der langsam wachsende und erst spat Ertrag gebende Olbaum der wichtigste, ja fast einzige Besitz ganzer Lander, dass in den verschiedensten Abschnitten der Geschichte Beispiele bekannt sind, wo man einen Gegner, den man mit Waffengewalt nicht niederzwingen konnte, den Todesstoss gab, indem man seine Ölbäume, wie es die Agypter im griechischen Freiheitskampfe taten und noch neuerdings auf Kreta Christen und Turken getan haben, systematisch niederhieb" — Cf. also the classical example from the time of the Peloponnesian war, Lysias VII, 6 ff, where it is said that the Laconians during the Dekeleian war devastated the Athenian country, i. a. hewing down the olive plantations

[2] Cf e g FISCHER, *Der Ölbaum*, p 17 ff

The decline of the oil production and the disappearance of the oil lamp *may* have been consequent upon a deterioration of climate in the Aegean region. Support for this supposition is given by the fact that in Cyprus too the oil-lamps disappear at the end of the Bronze Age as Professor E. GJERSTAD and Dr. A. WESTHOLM, Keeper at the Cyprus Collection, Stockholm, inform me. If such were the case, certain conclusions may also be drawn with regard to the Dorian migrations. That the great migratory movements are intimately bound up with climatic changes, can hardly be doubted — just as February and March are the typical months of revolutionary outbreaks. Proof of this is found in the Viking migrations in the North, the ultimate cause of which was a marked deterioration of climate in Northern Europe during the ninth century A. D. — the so-called 'Fimbul winter'. When the inhabitants of a region could no longer find the necessary sustenance, when lack of forage was caused by continued draught, or the grain did not ripen because of cold summers, then the people were compelled to look for new abodes and pushed their adjoining neighbours before them. Dr. ERIK GRANLUND has found a clear demarcation in the formation of the Swedish moors about 1200 B. C., his 'Rekurrensyta IV' [1], a date which Professor VON POST is inclined to draw down some hundred years, he tells me. Professor HELMUT GAMS, Innsbruck, has informed me that a climatic change, first observed in Sweden, extended over the whole of Middle and South-east Europe [2]. If this is true, it affords an explanation both of the Dorian migrations which brought about a cultural eclipse in the world of the Minoan-Mycenaean civilization and incidentally of the disappearance of the oil lamp.

2. The wooden coffin.

The wooden coffin found in tomb No. 8 (cf. above p. 41) was originally rectangular in shape and must have measured about 1.90 m. in length and 0.55 to 0.60 m. in breadth. It had been constructed of boards, 3 to 4 cm. thick. Unfortunately, its foot end had been damaged when the stone bench was erected along the inner wall of the chamber during the last occasion on which the tomb was used, but the bottom boards of the coffin could be traced, and some toe bones were still found *in situ* under the bench. A small piece of the upright board at the foot end could also be recovered by preservative treatment. The wood could be clearly distinguished as a brownish, decomposed, porous mass in the surrounding, compact, finely settled clay which rain-water had washed into the chamber. When scraping the tomb we first penetrated down to the bottom level along the natural stone bench, without, however, particular attention being paid to the left side of the coffin, but we could later trace the bottom of the coffin under the skeleton, and in this manner we ascertained its width. The coffin had been placed directly on the floor of the chamber, and it must have been closed, because the bottom was covered by a tough layer of dark, rich clay, obviously washed in by rain-water, 1½ cm. thick, in which the skeletal remains were embedded. The remainder of the coffin, as well as the helmet, that lay at its lower left side, was covered by a greyish-blue layer, in several places nearly 20 cm. thick, which also extended under the constructed stone bench. Its colour and its more porous texture clearly differentiated it from the washed-in layer of clay. This greyish-blue layer apparently consisted of ash, accumulated here from a fire on the chamber floor.

---

[1] Cf. GRANLUND, *De svenska högmossarnas geologi*, in *Sveriges geologiska undersökningars Årsbok* 26 (1932), p. 157 and fig. 150 p. 169.

[2] For the use of the results obtained by the climatologists in archeological contexts cf. VON POST, *Ein eisenzeitliches Rad aus dem Filaren-See in Södermanland, Schweden*, in *Kungl. Vitterhets Historie och Antikvitets Akademiens Handlingar* 46:1 (1932), p. 24 ff.

This is the first time that the use of a wooden coffin in a Mycenaean tomb has been established with certainty. BLEGEN believed he had observed remnants of such a coffin in one of the chamber tombs in the Argive Heraeum, cf. *Gnomon* 1928, p. 435, note, but in the great publication on the excavations he categorically declares: "There was no trace in any sepulchre of the use of a wooden coffin" (*Prosymna*, p. 249). On the other hand, he records the remains of wooden biers in three tombs — for my part I am more inclined to regard these as remains of burial sledges, not of biers, cf. below, p. 162.

The discovery of the wooden coffin in our tomb is likely to revive the earlier discussion of the method of burial in the shaft graves at Mycenae. As is well known, SCHLIEMANN held that the corpses were buried directly, shrouded in precious cloths adorned with all kinds of gold ornaments, and everything found in the graves was considered by him to be the personal property of the dead. It was only the Greek archaeologist STAÏS who in a lecture at the Archaeological Congress in Athens in 1905, later published in *Ephemeris Archaiologiki* 1907, p. 31 ff., drew attention to the fact that the finds from the shaft graves included a group of objects that had quite definitely been mounted on a wooden base. This was particularly true of the large gold-leaf stars with strong bronze nails, cf. KARO, *Schachtgräber*, Nos. 15, 17, 19, 25, 62, 86—90, Pls. XVI, XVII, XIX, and in one instance a bronze nail, 5 cm. long, still remained in the centre of the leaf star (No. 89, Pl. XVII). In addition, mention may also be made of the large quantities of bronze-nails and especially bronze platings of nail-heads, that have been found in the graves, cf. *Ephemeris Archaiologiki* 1907, p. 47—48, fig. These nails have certainly not all belonged to swords and knives. STAIS also called attention to the fact that many of the circular decorated gold discs had small holes for tacks and that the reverse of others was covered with a sticky substance, and he propounded the theory they were mounted on wooden coffins. In support of this idea he referred to certain clay larnakes from Crete, notably a sarcophagus found by XANTHOUDIDES in Artsa, cf. *Ephemeris Archaiologiki* 1904, Pl. 2, which showed a painted design reminiscent of the gold ornaments found in the graves and which, in his opinion, were ornaments adorning coffins. The larger decorated gold-plates, that SCHLIEMANN called 'diadems' and 'half-diadems', and the facial masks of gold he also wished to see placed on coffins whose shape he imagined to have resembled that of the Egyptian, anthropomorphous mummy coffins, cf. *Ephemeris Archaiologiki* 1907, p. 55, fig. 11.

In a paper in *Arch. Jahrb.* 1912, p. 208 ff., entitled "*Der Goldschmuck der mykenischen Schachtgräber*", M. MEURER went a step further in the advancement of this theory. From the gold masks, which he, like STAÏS, considered to have been nailed to a flat base as decoration on top of the main part of the coffin, he concluded that the Mycenaean coffins had an anthropomorphous "Gesamtform", like the Egyptian mummy cases. The so-called diadems and half-diadems he explained as having belonged to a Mycenaean variant of the well-known Egyptian pectorals. That facial masks have been found only in the graves of men does not, according to MEURER, exclude the possibility that womens' coffins may have had painted faces in plastic execution. MEURER went so far as to reconstruct, with Egyptian mummy cases in mind, a Mycenaean female coffin, on which he placed a number of the gold objects from the Third Shaft Grave, that could not be claimed with certainty as the personal property of the dead, cf. *Arch. Jahrb.* 1912, Pl. 12.

Even though one could not point to any certain traces of wooden coffins from Mycenaean graves at the time it seems that the propounded hypothesis at first gained a quite general acceptance, cf. f. inst. FIMMEN, *Die kretisch-mykenische Kultur*, p. 64 f. KARO also accepted STAÏS' opinion in his preliminary publication on the shaft graves, cf. *Ath. Mitt.* 40 (1915), published 1927, p. 135 f. As a note on p. 230 shows, he had, however, changed his opinion in the period between the writing of his paper and its publication, and in the great publication, *Die Schachtgräber von Mykenai*, München 1930—33, p. 38 f., he explicitly declares: "die Übertragung des rein kretischen Brauches der Larnakes (die wir zudem nur in Ton und einmal in Stein kennen) auf das Festland erscheint höchst gewagt." With regard to the shaft graves he reverts to SCHLIEMANN's original theory that the dead were buried only in shrouds richly adorned with gold. MARINATOS (cf. *Gnomon* 1928, p. 435) agrees with him, while EVANS in referring, among other matters, to KARO's earlier opinion (the note p. 230 seems to have escaped him!), in *The Shaft Graves and Bee-hive Tombs of Mycenae*, 1929, p. 4 ff., tries to confirm through analogies the theory of wooden coffins which fits well into, and is a postulate to, the development of his main thesis that the skeletons in the shaft graves were buried there after having been transferred from the bee-hive tombs. In his great publication KARO, *Schachtgräber*, p. 40, note 2, has not considered it necessary to offer any further arguments in refutation of EVANS' opinion on this matter.

Since the view most recently expressed by KARO may be considered as the generally accepted one at present, we have to test those arguments which have caused him to revert to SCHLIEMANN's opinion.

1. The normal distance between the corpses in the same shaft was about 1 m. and the space between them was usually filled with burial gifts "Dies spricht gewichtig gegen die Verwendung von hölzernen Särgen und Bahren" (p. 38).
2. The supposition that larnakes were used on the Mainland he finds "höchst gewagt" even if BLEGEN should have determined remnants of such in younger graves in the Argive Heraeum. "Eine solche Ausnahme bestätigt nur die Regel, dass Särge auf dem Festlande sonst nicht nachweisbar sind" (p. 39).

3. SCHLIEMANN found several of the decorated circular gold-plates immediately on top of the skeletons under other gold objects and in part also under the skeletons (p. 39).

4. The facial gold masks do not have perforations at the edges for the purpose of fastening them to a coffin-lid. Though, the pairs of holes at the ears are intended for attachment; they have been made by slitting, not by boring, and cannot have been made by driving a nail through the mask (p. 39).

"Dies alles beweist dass die Leichen in Tücher oder Binden gehüllt und Masken, Brustbleche, Diademe, Kronen u. ä. festgebunden oder angenäht wurden" (p. 39).

In the first place, as regards the distance between the corpses, it does not seem to contradict the use of coffins in any way — the coffin in our tomb had a width of 0.55 to 0.60 m., and the intervening space of approximately this width left between the coffins seems to me more than adequate for the placing of burial gifts between them.

True enough, it is not a Mycenaean custom to bury in larnakes, but we have certain evidence of their use from three different places. In tomb 3 at Thebes KERAMOPOULOS found among other objects the remains of a large larnax of terracotta, cf. *Deltion* 1917, p. 92, fig. 66. The tomb, to judge from the description of the finds, belongs to Late Helladic II and the beginning of III. In tomb 502 at Mycenae WACE likewise found fragments of a larnax, cf. *Chamber Tombs*, pp. 9, 184, ascribed to the later part of Late Helladic III. In tomb 17 in the Argive Heraeum BLEGEN came across a larnax containing a skeleton; it is assigned to Late Helladic III, cf. *Prosymna*, pp. 54 f., 249, 456. It is this latter find which certainly justifies us in considering the fragments in the tombs at Thebes and Mycenae as remains of larnakes used for burial purposes. In themselves it would also be possible to regard them as bath tubs, cf. WACE, *Chamber Tombs*, p. 184 — such have been found by BLEGEN in Zygouries, cf. *Zygouries*, p. 142, fig. 134, and by SCHLIEMANN in Tiryns, cf. *Tiryns*, p. 158, Pl. 24 *d*, *e*. This twofold use of the large clay troughs, as bath tubs and as coffins, is, however, also characteristic of Crete during Late Minoan III. — The examples quoted, proving that the Cretan use of clay larnakes occurred on the Greek Mainland, are not numerous, it is true, but they show that KARO's conclusion "dass Särge auf dem Festlande *nicht* nachweisbar sind" is untenable.

KARO's statement that we know of larnakes from Crete "nur in Ton und einmal in Stein", also deserves special comment. In Crete larnakes occur at least as early as Early Minoan III, possibly even during II, cf. PENDLEBURY, *The Archaeology of Crete*, p. 65, and thus they have there undergone a long development. The oldest, without lids, have four handles and rounded corners. During Middle Minoan a more or less convex lid comes into use, but the shape as a general rule continues to be oval. During Late Minoan two types exist side by side, the bath type, never with a lid, and a rectangular type, the chest larnax, often with feet and a gabled lid with projecting ridge pole at either end to enable the lid to be raised. As to the prevalence of these two types, the chest type is characteristic of Central Crete, the bath type of Eastern Crete, cf. *BSA. Suppl. Pap.* I, p. 151 ff. There is little doubt that the bath larnakes were actually in domestic use before they were employed as coffins, cf. PENDLEBURY, *The Archaeology of Crete*, p. 245. The older oval larnakes with rounded corners no doubt have their prototype in the large grave pithoi, especially made for the purpose, which were so common in the Near Orient, cf. HALL, *The Civilization of Greece in the Bronze Age*, p. 190, while the rectangular larnakes must certainly have their prototype in wooden coffins. The primary material employed has determined the shape just as in the case of the primitive house — the round or oval hut is a stone construction, the rectangular house a wooden construction.

It is true that no wooden coffins have come down to us in Crete. However, not only the rectangular shape, but also certain formal details and features of their decoration give clear evidence of the prototype of the chest-larnax. The arguments advanced by XANTHOUDIDES, *Ephemeris Archaiologiki* 1904, p. 10 ff., by BOSANQUET, *BSA. Suppl. Pap.* I, p. 152 f., and by others seem to me wholly convincing. Even the feet which are formed by the prolongation of the corner sets are a typical detail taken from carpentery — a wooden coffin ought to be above the level of the ground in order to avoid humidity. The sides are divided into panels, some times two panels on either side, corresponding in size with the end panels, and similar divisions on the lid. Furthermore on one of the larnakes published by XANTHOUDIDES in *Ephemeris Archaiologiki* 1904, larnax *B* from Artsa (Pl. 2), the frame around the panels possesses round ornaments at the corners with a small circle in the middle, indicating nails with decorative attachments of the same kind as those on the bronze nails from the shaft graves. Another characteristic feature taken over from a wooden original is the small filling between the frame mouldings in the upper angles of the panels. The Hagia Triada sarcophagus, the only stone larnax we hitherto know from Crete, tells exactly the same story. There are imitations of strong wooden beams in the corners of the coffin which continue downwards below the coffin proper, forming feet. The lateral strips of the frame round the end panels, cf. f. inst. BOSSERT, *Alt-Kreta*^{3}, fig. 253, are decorated with a pattern representing the veining of the fine grained wood of a deciduous tree. All doubts regarding the justification for assuming a wooden model for this sarcophagus are dispelled by a reference to the publication of WATZINGER, *Griechische Holzsarkophage aus der Zeit Alexanders des Grossen*, in *Ausgrabungen der deutschen Orientgesellschaft in Abusir* 1902—1904, where exact parallels are given: cf. especially the Nereid sarcophagus from Anapa in Southern Russia, p. 36, fig. 64, and the Abusir sarcophagus, Pl. II.

It is worth mentioning that the rows of rosettes found in bands above and below the main panels on the Hagia Triada sarcophagus are reminiscent of certain decorated circular gold-plates with tack holes from the shaft graves, which may have constituted a corresponding decorative motive on a wooden coffin. Thus, KARO is certainly mistaken when he attempts to cast suspicion on the occurrence of wooden coffins by emphasizing the fact that we find in Crete only larnakes of clay or stone — "Larnakes, die wir zudem nur in Ton und einmal in Stein kennen". These chest-larnakes used for burial purposes were no doubt originally related to the Minoan clothes-chests in the same manner as the bath-larnakes to the bath — in both cases it is a question of pieces of furniture being later utilized for funerary purposes. A frequent epithet for a chest in Homer is "well smoothed", *ἐϋξέστη*, indicating that their material was actually wood (cf. XANTHOUDIDES, *Ephemeris Archaiologiki* 1904, p. 10 f.); and it is certain that such wooden chests were decorated in the most splendid manner — XANTHOUDIDES rightly reminds us of Kypselos' larnax (*ib.*, p. 13 f.). In Crete, where ceramics were extraordinarily highly developed, the wooden chest was translated into clay and, if we do not find any great number of clay larnakes on the Mainland, this might be explained by the fact that the original material was retained here. Our find in tomb No. 8 proves conclusively that wooden coffins occurred during Late Helladic II.

There is yet another feature which deserves emphasis regarding Cretan chest-larnakes of terracotta. BOSANQUET lays stress upon the fact that this type was in use from the close of Late Minoan II onwards and survived comparatively late in Late Minoan III. In view of what has already been said above concerning wooden models it is highly probable that we have to reckon with wooden chests in Crete also before this date.

The golden rosettes with bronze nails, of whose use KARO is completely silent after having categorically rejected the theory of wooden coffins, actually furnish additional evidence for the occurence of wooden coffins in the shaft graves. With reference to MEURER's attempt to reconstruct a mummy case KARO briefly says: "Davon kann keine Rede sein". It is possible that MEURER has gone too far — I cannot accept his reconstruction in every detail — but it is certain that the anthropomorphous inner coffin was developed in Egypt as early as the great period of the Middle Kingdom, cf. KEES, *Totenglauben und Jenseitsvorstellungen der alten Ägypter*, p. 388. This, of course, does not exclude the possibility that the coffins in the shaft graves were rectangular, like our coffin in tomb No. 8, thus non-anthropomorphous, and that these rectangular coffins had nails inserted through gold ornaments, nor does it exclude the possibility of several of the round, decorated gold-plates having adorned the coffin, while others, of a similar nature adorned a winding sheet in the coffin, thus accounting for the position in which they were found under the dead. It is almost certain that the dead were actually shrouded and that the gold masks were placed over their faces, and fastened with bands, the projecting edge being concealed by the shroud. This is especially evident from the representation of a shrouded corpse on the Hagia Triada sarcophagus who is receiving the offerings with shrouded arms. That the figure actually represents a dead person is also indicated by the tomb facade immediately behind it, the very entrance of which is adorned with exactly the same spiral pattern that BLEGEN found on the entrance of tomb 2 in the Argive Heraeum, cf. *Prosymna*, Plan 39 — a parallel that has escaped his attention. We shall return to this below p. 160 f.

A question that now arises is as to whether we have to regard the use of wooden coffins as an indigenous feature or as one borrowed from abroad. I have dealt with the burial customs during Middle Helladic at length in *Asine*, p. 341 ff., and my study clearly shows that rectangular "enclosures", built of stone or sometimes of rough bricks around the dead and cists composed either of small stones or flat slabs placed upon one another, or of large ashlar blocks placed on end or sometimes of double rows of tiles placed on edge, with a filling between, are common types of graves employed during this period in addition to rock- or earth-cut shafts and pithos tombs. In graves that in themselves were coffin-shaped, there was certainly no need of any extra coffin. But in the great shaft graves at Mycenae, which constitute a further development of the Middle Helladic grave type[1], where in most instances several corpses were placed in the same shaft side by side, the need of special coffins quite naturally arose. I do not by any means wish to deny that the use of wooden coffins may thus have arisen in Mycenae independently of any influence from elsewhere, but the fact that the use of single graves was abandoned indicates in itself certain changes in the attitude to the dead. Several indications seem to argue in favour of an Egyptian influence in this respect.

Ever since the time of the Old Kingdom it was customary in Egypt to shroud the dead in one way or another[2]. During the Old and the Middle Kingdoms rectangular coffins were used for persons of rank and were composed either of stone, "die königliche Gnade verschenkte"[3], or of wood, mostly of coniferous wood, which was scarcely less expensive in a country so deficient in wood as ancient Egypt. Because of the nature of the material I am most inclined to see, with HALL, traces of influence from Babylonia and the Near East in the older clay larnakes of Crete, and not an Egyptian influence as EVANS does. As early as the Middle Kingdom these rectangular coffins were often decorated and painted in many colours. During the great period of the Middle Kingdom it became customary to enclose the shrouded dead in a special casing, which, to ensure even better protection, was placed inside the rectangular coffin. This casing, in its turn, then came to influence the form of the outer coffin which thus assumed an anthropomorphous shape. During the period of the shaft graves the rectangular coffin was the customary form for people of rank in Egypt, at least as an outer casing.

If it had only been possible to prove that the rectangular type of coffin occurred simultaneously in Mycenae and in Egypt, I should have hesitated to suggest Egyptian influence. However, there are other circumstances which also point in the same direction, circumstances that have not received in recent research the attention which they truly deserve. In the First Shaft Grave at Mycenae SCHLIEMANN discovered a mummified head. I have directed attention to this find in *Asine*. p. 351, and at the same time to HELBIG's relevant statements in *Das Homerische Epos*, p. 51 f. SCHLIEMANN's description of this find is of such importance that I may be permitted to quote verbatim from the text in his book *Mycenae*, p. 296 f. (the German edition p. 340). It runs as follows:

"But of the third body, which lay at the north end of the tomb, the round face, with all its flesh, had been wonderfully preserved under its ponderous golden mask; there was no vestige of hair, but both eyes were perfectly visible, also the mouth, which, owing to the enormous weight that had pressed upon it, was wide open, and showed thirtytwo beautiful teeth. — — — The nose was entirely gone. — — — The colour of the body resembled very much that of an Egyptian mummy. — — — But nobody being able to give advice how to preserve the body, I sent for a painter to get at least an oil-painting made, for I was afraid that the body would crumble to pieces. Thus I am enabled to give a faithful likeness of the body, as it looked after all the golden ornaments had been removed." *Mycenae*, Fig. 454 represents a mummified head — it should be compared with the head of an Egyptian mummy, f. inst., in ELLIOT SMITH, *Egyptian Mummies*, in *Journal of Egyptian Archaeology* I, p. 193, Pl. 32, fig. 1.

---

[1] Cf as to this BLEGEN and WACE in *Symbolae Osloenses* IX, 1930, p. 31 ff, and *Asine*, p 349.

[2] Cf KEES, *Ägypten*, in *Kulturgeschichte des alten Orients*, p. 15

[3] Cf. KEES, *ib*, p. 75.

I cannot but attribute the greatest importance to this feature which affords such incontrovertible evidence of Egyptian influence during the period of the Shaft graves. That the mummification did not succeed better than is the case is not surprising since the art of mummification in Egypt only reached perfection later, at the beginning of the New Kingdom, cf. ELLIOT SMITH, *l.c.*, p. 193.

Yet another fact deserves special consideration in this connection. In the Third Shaft Grave SCHLIEMANN found gold-plates of different shapes, which had been used to cover two corpses of children, cf. KARO, *Schachtgräber*, p. 62, No. 146. The thin plates had been tightly pressed around the body in such a manner that it was completely enclosed, and in addition, the face, hands and feet had been moulded by being chased, though only in a summary manner. Exactly the same custom of completely enclosing the dead in gold-plate is met with in Egypt, cf. MACE-WINLOCK, *The Tomb of Senebtisi at Lisht*, p. 36 ff. It is this custom which in the time of the New Kingdom finally led to the use of magnificent inner coffins of solid gold, cf. CARTER, *The Tomb of Tut-ankh-amen*, II, p. 78 f., Pl. 70.

In these gold coverings with faces in chased work that entirely shroud the corpses we see the origin of the facial masks of the male skeletons which also possess pectorals with indicated nipples. In my opinion, MEURER has succeeded in establishing a plausible case for regarding the so-called diadems and half-diadems as pectorals, cf. *Arch. Jahrb.* 1912, p. 215 ff., that were in use in Egypt ever since the period of the Old Kingdom and which were frequently represented on mummy cases during the New Kingdom. Those parallels to which MEURER has drawn attention are too obvious to be dismissed without a detailed comparative study being made — and one which KARO has not effected (*Schachtgräber*, p. 39). As regards the gold masks KARO admits, *Schachtgräber*, p. 180, that the Egyptian mummy coffins afford "unmittelbare Gegenstücke", and since Cretan vases have been found in contemporary Egyptian graves, he admits that "die Ableitung unserer Masken von Ägypten" seems to be "die einleuchtend einfachste Erklärung". In spite of this he refuses to believe in a direct communication between Egypt and the Mainland; he regards Crete as a necessary connecting link, and no corresponding finds have been made there. Indeed, he conceives the possibility that the gold masks "einen ganz selbständig in Mykenai entstandenen Brauch darstellen." This is, however, more than improbable in view of the abundant evidence of direct communication between Egypt and the Mainland — we shall return to this below p. 176 ff.

As regards wooden coffins in shaft graves I shall briefly summarize the views I have formed as follows: Several of the dead were interred in rectangular wooden coffins adorned with ornamental bronze nails with appendant gold-leaf decoration and probably also with gold rosettes placed in rows. There is no evidence to indicate the existence of an inner anthropomorphous wooden coffin, but the dead were certainly richly shrouded, and it is probable that they were more or less carefully mummified and that certain gold ornaments were placed directly on top of the mummy. I presume that the use of wooden coffins, together with other "Nilotic" funerary features of the burial, was, as regards the Greek Mainland, derived from Egypt.

The find of the wooden coffin in our tomb No. 8 shows that persons of rank were occasionally buried in rectangular wooden coffins during the Mycenaean period and the grooves through the doorway in some of the elder chamber tombs provide, in my opinion, further proof of such coffin burials, cf. below p. 156 f. In view of this fact it seems highly probable that people were similarly buried in the shaft graves — in No. 6, however, at least one corpse was buried in quite a different way. The custom of burying the dead in wooden coffins, however, did not become general. Indeed, during the Mycenaean age, the practice of burying the dead in a shaft hewn out of the rock was generally adopted which may have rendered the wooden coffin superfluous, or alternatively, the dead were placed on a stone bench erected in the chamber, or on a bier or sledge (cf. below p. 162), or, more frequently, directly on the floor of the chamber.

3. The bronze helmet, a new Mycenaean helmet type.

Referring to the Mycenaean helmet in *Der griechische Helm* (Diss. Marburg 1936) KUKAHN says on p. 6: "Die gesamte Helmkappe aus Bronze herzustellen war einer späteren Zeit vorbehalten." This statement is disproved by our find in tomb No. 8, cf. above p. 43.

The right side of the helmet is somewhat deformed and shows several defects, cf. Pl. I: 1. Because of the risk of further damaging the find in attempting to restore the helmet to its original shape, we preferred to leave it in the somewhat deformed condition in which it was discovered, and made instead a copy in copper-plate — the result is to be seen in fig. 114. In manufacturing the copy, we became aware that the strikingly deep opening over the crown of the head had simply been made for technical reasons. The greatest difficulty in making the copy out of one piece was to hammer out the part covering the back of the head, and our copper-smith found it quite natural that the front part of the crown of the head should be unprotected. This condition probably caused no great inconvenience. The wearer of the helmet was unprotected only against projectiles, thrusts and blows directed at him straight from the front — and from these he could easily protect himself with the shield; a blow directed obliquely from the front would be stopped by the two reinforced edges of the strongly projecting cheek-pieces.

To judge from its size, the helmet had a lining of leather at least 1 cm. thick, carefully fastened by means of the holes, about 1 cm. apart, all along the edge. It is highly probable that this lining also covered the crown of the head in the opening between the projecting cheek-pieces. In later times a special piece of bronze was placed in the opening, cf. fig. 115. Dr. A. Westholm drew my attention to such pieces, found at Idalion in Cyprus, registered in the *Swedish Cyprus Expedition*, II, p. 536, No. 148, and p. 543,

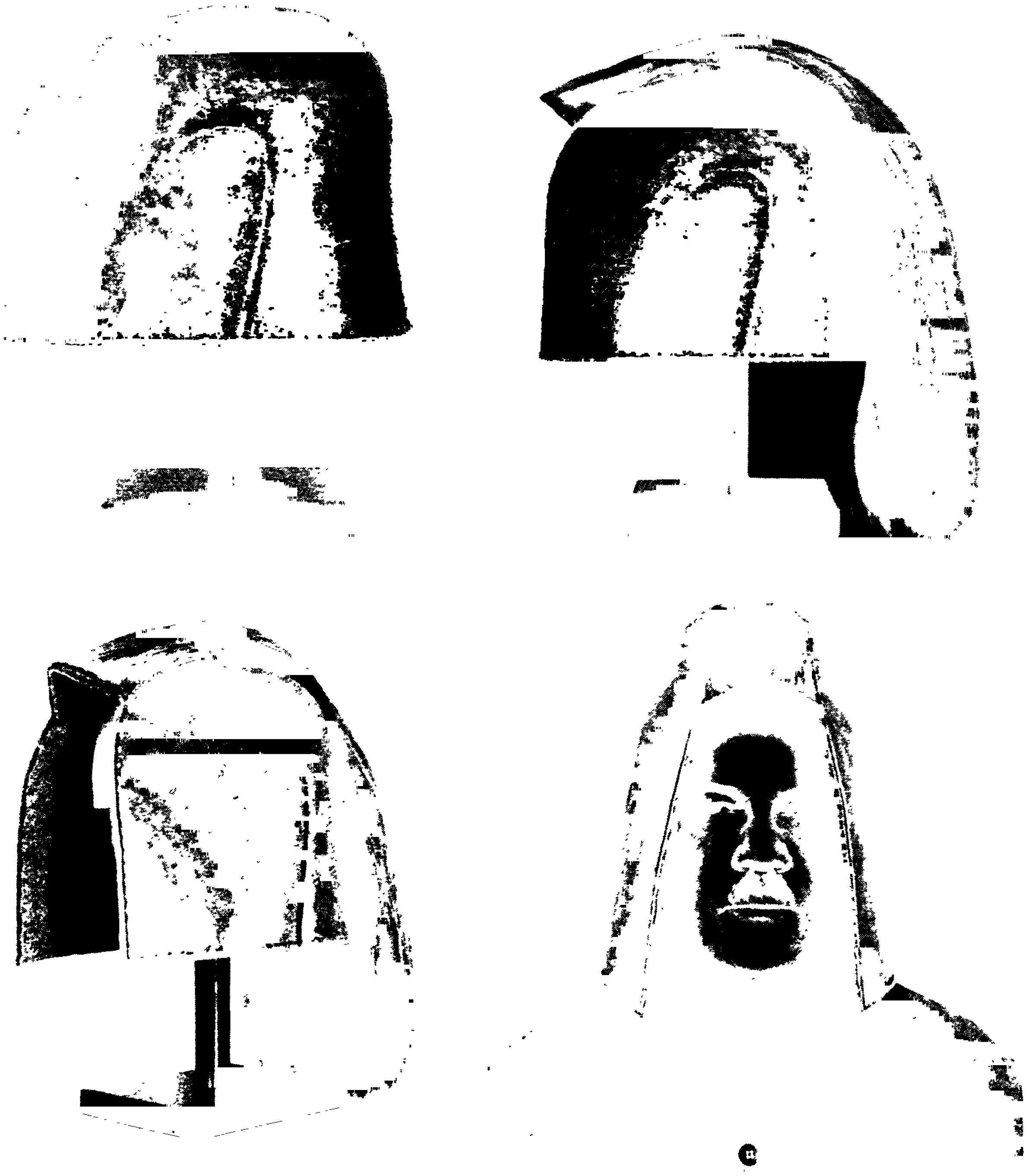


Fig. 114 Copy of bronze helmet from chamber tomb No. 8

No. 416, and there described as "sole-shaped, narrow lateral pieces of a bronze helmet." The swung 'sole' of the figured piece fits perfectly in the opening between the cheek-pieces; from the straight part a separate piece protecting the nose projected downwards[1]. This opening was masked in addition by a projecting crest, for the attachment of which there are two holes on the top of the helmet, immediately behind the reinforced rim with the perforations for fastening the lining.

No counterpart to our helmet exists among the finds hitherto known from the Greek Mainland or Crete. An examination of extant representations of helmets also appears at first to give a negative result, cf. KUKAHN, *Der griechische Helm*, pp. 1—7. The only representation of a helmet of our type that I have been able to find — it has, by the way, escaped KUKAHN's attention — is on the stela found above the Fifth Shaft Grave at Mycenae, cf. KARO, *Schachtgräber*, p. 168, Pl. VII. This includes a warrior carrying a shield of "Boeotian" type and wearing a crested helmet, who lies beneath the hooves of a galloping horse, having been overthrown by another warrior in a chariot. Unfortunately the representation is badly preserved (the material is porous) and of too general a nature to convey anything more than a bold impression, but having our helmet in mind, it seems obvious to me that a helmet has here been portrayed which completely covers the back of the head and possess two large, strongly projecting cheek-pieces in addition to a large longitudinal crest.

This type of helmet represented by our find and on the relief from the above mentioned stela is quite distinct from the two other forms of helmet that were earlier known from the Mainland, the boars' tusks helmet and the round helmet covered with bronze, which was provided with a chin-strap or loose cheek-pieces, cf. KUKAHN, *Der griechische Helm*, p. 3 ff.

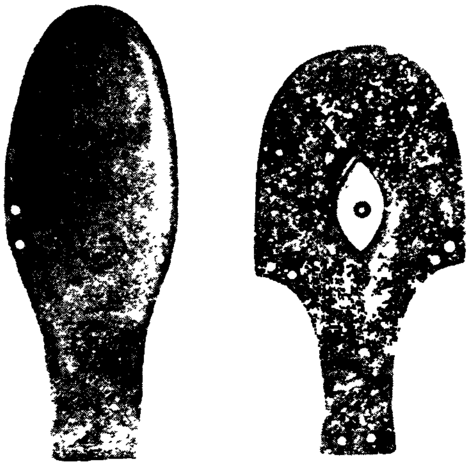


Fig. 115. Pieces of bronze helmets from Cyprus

As regards the Cretan helmets two main types may be distinguished, the laminated and the single piece, the latter being either conical or in the shape of a hood, cf. KUKAHN, *op. c.*, p. 1 ff[2]. It is this latter helmet, made out of one piece in the shape of a hood, that most resembles our new helmet type. It is most clearly depicted on the well-known steatite-rhyton from Hagia Triada, cf. f. inst. BOSSERT, *Alt-Kreta*³, figs. 271—275. The hood helmet with finely curving lines extends far down over the back of the head and has a slightly projecting, protective lip at the extremity; a somewhat up-turned peak occurs at the front and a hole for the ears, below which loose cheek-pieces are attached as broad, protective elements. KUKAHN rejects, *op. c.*, p. 2, with entire justification in my opinion, KURT MÜLLER's supposition that it is here a question of a special gladiatorial helmet, cf. *Arch. Jahrb.* 1915, p. 249. In spite of a certain general similarity the differences between this helmet type and the new Mycenaean example are too essential to permit the establishment of any relationship between them.

---

[1] Cf. OHNEFALSCH-RICHTER, *Kypros the Bible and Homer*, pl. LXX, 1—8. Similar pieces found at Tamassos and labelled "fragments of bronze armour".

[2] Cf. also EVANS, *Palace of Minos*, IV, p. 867 ff. The Minoan helmets. For my part I cannot share EVANS' opinion that the boars' tusks helmet was indigenous to Crete.

The use of helmets undoubtedly originates in the Near East, cf. BONNET, *Die Waffen der Völker des alten Orients*, p. 201. Many different types more or less related, are characteristic of the different peoples. Already the most ancient Old-Babylonian helmet with a low point on the crown is closely fitted to the head. It projects strongly in front, and extends vertically downwards from the temples, covering the ears and the back of the head, sometimes with the auricles plastically represented (hardly an orifice as BONNET states, *op. c.*, p. 201; cf. his fig. 98). In addition to this faintly curved hood the pointed helmet shape already appears at an early date, later becoming the typical Babylonian form. The same shape occurs in Assyria, later developed into a spiked helmet by the Hittites, whose helmets, however, are of a more purely conical shape. Helmet adornments occur on both Hittite and Assyrian helmets, either in the form of a panache or of a crest.

Helmets were introduced into Egypt at a comparatively late date, and it seems as if the Egyptians adopted them because of the experience gained in the battles with their helmeted adversaries in Asia. Among the many representations of helmets worn by Egyptians, as well as by "Fremdvölker", there is none that closely compares to our type.

As regards the Near East, however, the available material has not yet been presented in such a form that it is possible to state with certainty whether our new Mycenaean helmet type has forerunners there or is an indigenous Mycenaean type, produced for better protection when the arms of assault, above all the sword, were improved. Personally I am most inclined to hold the latter opinion.

In the later development of the helmet the so-called insular type closely approaches to our form. In this a free visage section is cut away, and it is thus entirely open in front without protection for the nose or holes for the eyes. As regards the finely formed curvature at the back of the head our helmet especially resembles the later Ionic helmets, sometimes imitated in the shape of oil-vessels, aryballae. The North-Greek-Attic type in the Geometric Period approximates to the insular form, while the Peloponnesian type further develops the Mycenaean boars' tusks helmet into a conical helmet. Still closer to our helmet comes the later Cypriote form with immovable cheek-pieces, cf. KUKAHN, *op. c.*, p. 14, Pl. V, 5, but differs essentially, however, in the extension down over the crown and the forehead and in a relatively short back-piece. A helmet also occurs on Cretan monuments, from Praisos, Palaikastro, etc., with an unprotected visage section, cf. KUKAHN, *op.c.*, p. 15 f. KUKAHN's assumption that this type has its prototype in the Babylonian form with the Cypriote as intermediary, is disproved by our find.

As the above survey shows, it is difficult to range our helmet among the material hitherto known from the Mycenaean Age. It is therefore all the more astonishing that it corresponds perfectly to a type of helmet described in Homer and which has so far puzzled his commentators.

Homer refers to helmets made entirely of metal in at least five places, Il. XII, 183 *κυνέη χαλκοπάρηος*, in the following verse termed *χαλκείη κόρυς*: Il. XVII, 294 *κυνέη* *χαλκοπάρῃος*, in the following verse called *ἱπποδάσεια κόρυς*; Il. XX, 397 *κυνέη χαλκοπάρῃος*, in the following verse *χαλκείῃ κόρυς*: Od. XVIII, 378 *κυνέη πάγχαλκος, ἐπὶ κροτάφοις ἀραρυῖα* and Od. XXII, 102 with the same words.

The terms for Helmet employed in Homer are *κόρυς, κυνέη, πήληξ* and *τρυφάλεια* with *κόρυς* implied. It seems as if we would have to interpret *κόρυς* (etymologically to be compared with *κορυφή*) as made of metal, of which there is evidence in the epithets *χαλκείη, χαλκήρης, χαλκοπάρῃος, ἐπὶ κροτάφοις ἀραρυῖα, λαμπομένη, λαμπρή, παμφανόωσα, φαεινή* etc., cf. EBELING, *Lexicon Homericum. s.v. κόρυς*. *Κυνέη* has a wider meaning and is sometimes a leather helmet — it may be *ταυρείη, ῥινοῦ ποιητή, κτιδέη, αἰγείη* — but as the quotations already given show *κόρυς* may be termed *κυνέη*, and the last-mentioned term has also adjectional attributes *χαλκήρης, χρυσείη, χαλκοπάρῃος, πάγχαλκος* or *εὔχαλκος, ἐπὶ κροτάφοις ἀραρυῖα*. Also *πήληξ* (etymologically to be connected with *πέλλα, πελλίς*, 'coupe', cf. BOISACQ, *Dictionnaire étymologique, s.v.*) just as *τρυφάλεια*, i.e. with four *φάλοι*, designates the same thing as *κυνέη*, which is evident from the Il. XVI, 793 ff., where the encounter of Hektor and Patroklos, who wears the helmet of Achilles, is described. The passage runs as follows:

> *τοῦ δ' ἀπὸ μὲν κρατὸς κυνέην βάλε Φοῖβος Ἀπόλλων·*
> *ἡ δὲ κυλινδομένη καναχὴν ἔχε ποσσὶν ὑφ' ἵππων*
> *αὐλῶπις τρυφάλεια, μιάνθησαν δὲ ἔθειραι*
> *αἵματι καὶ κονίῃσι· πάρος γε μὲν οὐ θέμις ἦεν*
> *ἱππόκομον πήληκα μιαίνεσθαι κονίῃσιν . . . .*

It is thus primarily a question of *κυνέη* which Apollon strikes off the head of Patroklos and *αὐλῶπις τρυφάλεια* rolls rattling under the hooves of the horses, and the crest of horse-hair is soiled with blood and dust. Never before *ἱππόκομος πήληξ* had been soiled with dust.

As regards the etymology of *κυνέη* it is strange that the ancient popular etymology which interprets the word as fem. of *κύνεος* with implied *δορά* (= hide) in the meaning of helmet, originally of dog-skin — cf. f. inst. Hesychios s.v. *κυνέη· κυρίως μὲν ἡ ἐκ κυνείου δέρματος περικεφαλαία* — is still met with in dictionnaries, f. inst. in LIDDELL-SCOTT, *Greek-English Lexicon*; CUNLIFFE, *A Lexicon of the Homeric dialect*. In Homer it does not have the slightest support as the adjectival qualities quoted above show — it is, indeed, perfectly absurd to speak of "a dog-skin helmet of ox-hide" or "of weasel-skin"! — That the etymology in itself is old is best proved by *κυνέη Ἄϊδος* — Hades is, indeed, represented in a wolf-head or rather dog-head cap[1] — but this does not in any way improve the matter. As regards *κυνέη Ἄϊδος*, that Athena wears in Il. V, 845, in order to make herself invisible to Ares, we are there concerned with a play upon words, in which *Ἀΐδης* preserves its original meaning, "the invisible", relating to the fact that the helmet — just such a helmet as ours! — makes the face invisible, cf. below

---

[1] Cf. ROSCHER, *Lexikon der griechischen und römischen Mythologie*, s. v. Hades, p. 1805

p. 125. Another attempt to etymologize *κυνέη*, which, however, has not received any great attention, was made by GOEBEL in his *Lexilogus zu Homer*, p. 126 f. He refers the word to a stem *κυ-* with the meaning “swell” and connects it with such words as *κύαθος*, 'cup'; *κύαρ* 'cavity', 'hole'; in Latin *cavus*, *cavea*, *caverna*, etc. In itself this combination seems to me more acceptable, but I venture, nevertheless, to propound a new suggestion for consideration. I would connect the stem *κυ-* with a pre-Greek *ku* which is met with in *κύπριον*, the Latin *cuprum*, in the name Cyprus and which I believe to have found in the Cretan language, *ku-si* = copper axe. If this combination is correct, we have to imagine that *κυνέη* has originally been of metal, then imitated in leather, and early in classical time the typical popular etymology has arisen *via κυνέη δορά*.

We may now return to the helmet made entirely of metal, *κόρυς* or *κυνέη πάγχαλκος* in Homer, and attempt to imagine its appearance from the text. The most detailed description of this type of helmet is to be found in Il. XII, 182 ff.:

> *ἔνθ᾽ αὖ Πειριθόου υἱός, κρατερὸς Πολυποίτης,*
> *δουρὶ βάλεν Δάμασον κυνέης διὰ χαλκοπαρῄου·*
> *οὐδ᾽ ἄρα χαλκείη κόρυς ἔσχεθεν, ἀλλὰ διαπρὸ*
> *αἰχμὴ χαλκείη ῥῆξ᾽ ὀστέον, ἐγκέφαλος δὲ*
> *ἔνδον ἅπας πεπάλακτο· δάμασσε δέ μιν μεμαῶτα.*

Polypoites hurls his spear at Damasos and hits the “bronze-cheeked” helmet; the bronze helmet did not hold, for the bronze spear-head pierced it and also crushed the skull, and the brain scattered abroad within. It is a question of a closed type of helmet that is “bronze-cheeked” — the expression is correctly commented upon in AMEIS-HENTZE, *Homeros Odyssee* XXIV, 523: “wegen der Backenschirme, die mit der Kappe aus einem Stück getrieben waren und unbeweglich an derselben festsassen.” The epithet *χαλκοπάρῃος* occurs, as already stated, in three contexts in the Iliad: XII, 183; XVII, 294; XX, 397 and in the lines referred to in the Odyssey. REICHEL says in *Homerische Waffen*², p. 96: “dass die Dichter in jenen vier Fällen dennoch korintische Helme und nur solche im Sinne hatten, kann nicht absolut geleugnet werden.” In order to explain this anachronism he adds the following: “Es handelt sich nicht um Hauptthelden, sondern um rein episodische Gestalten; es ist sehr wohl denkbar, dass gerade an solchen versteckten, nebensächlichen Stellen ionisches Costüm einmal auftaucht. In dieses allein aber gehört die Helmart.” — Tomb No. 8 in Dendra teaches us something else!

HELBIG, *Das Homerische Epos*, p. 295 ff., also deals with the Homeric helmet. The cheek-pieces of the helmet composed wholly of metal HELBIG imagined as fitting closely to the face, and, consequently, furnished with eye slits like a vizor helmet — especially in view of the epithet *αὐλῶπις*, which he translates “with tubes for the eyes” — a vizor with eye-slits. He reminds us of the numerous instances on which it is said that the eyes “sparkled terrifyingly” — he imagines from behind the slits (HELBIG, *op.c.*, p. 297). He also attaches great importance to the fact that the face is covered by the helmet to such an extent that it was impossible for the heroes to recognize one another in the fray by anything else than external characteristics such as their armour and steeds. While Diomedes works havoc in the ranks of the Trojans, Aeneas and Pandaros wonder who this terrible adversary might be until Pandaros finally infers from his helmet, shield, and team that he is the son of Tydeus, Il. V, 175 ff. Patroklos asks Achilles to lend him his armour in order to make the enemies believe that the terrible Pelides again takes part in the battle, and when he then marched out clad in the armour of Achilles, the Trojans in fact mistook him for the latter, Il. XVI, 41, 278 ff. According to HELBIG this speaks for vizor helmets.

The epithet *αὐλῶπις* has given rise to the most fantastic explanations ever since antiquity (cf. HELBIG, *op.c.*, p. 296), most recently on the part of those who have been unwilling to accept — and with full justification! — HELBIG's vizor helmet, cf. REICHEL, *op.c.*, p. 96 ff. REICHEL thus rejects HELBIG's translation "röhrenäugig", but also "hochröhrig", the other adjective that occurs already in the Homeric commentators of antiquity, "mit einer hohen den Busch tragenden Röhre versehen," cf. Etym. Magnum, *s.v. αὐλῶπις* p. 170, 3: *αὐλίσκον ἔχουσα, ἐφ᾽ οὗ πήγνυται ὁ λόφος.* REICHEL proposes — and he is in the best company — that the epithet refers to "jene auf gewissen ältesten Helmarten angebrachten hornartigen Vorsprünge" — "röhrenartige Ansätze, wie bei der Schnecke oder dem *αὐλωπός, αὐλωπίας* genannten Fische." — One has gone far astray from the only natural translation: *αὐλῶπις* = *hiatum habens ad perspiciendum.*

The person who dons our helmet discovers that because of the protruding cheek-pieces his field of vision is extremely limited, and his face is completely invisible to all except those who view him straight from the front. It is easy to understand that the eyes sometimes "sparkled terrifyingly" in a such frame.

Homer's statement that the shining helmet swayed around the temples — Il. XIII, 805 *ἀμφὶ δέ οἱ κροτάφοισι φαεινὴ σείετο πήληξ* (cf. also Il. XV, 609 and 648) — is also comprehensible when we consider our helmet, just as the meaning of *ἐπὶ κροτάφοις ἀραρυῖα*, "exactly adjusted to the temples" becomes perfectly clear. This epithet is aptly applied to our helmet in view of the concave indentations marking the ears and the line of the neck on the sides of the helmet. The epithets *ἱππόδασυς* and *ἵππουρις* applied to Homeric helmets provide a certain justification in supposing that the crest of our helmet consisted of a horse's tail.

Once again an unexpected find from the Mycenaean Age has come to the defence of Homer against those who have traced additions and have sought explanations of Homeric descriptions in younger civilizations. It is well known that the archaeological momenta in Homer which may be referred with absolute certainty to the Mycenaean Age are as yet not impressively numerous, cf. NILSSON, *Homer and Mycenae*, p. 137—150. With Nestor's cup and the boars' tusks helmet we can range with equal certainty since the find in tomb No. 8 at Dendra *κυνέη πάγχαλκος — χαλκοπάρῃος — αὐλῶπις — ἐπὶ κροτάφοις ἀραρυῖα*, a helmet wholly of bronze, with bronze cheek-pieces, with limited field of vision, and exactly adjusted to the temples. (See further p. 199).

⁂

I wish to take this occasion for correcting the opinion I have earlier stated with regard to a find that we made in the 'Cenotaph', chamber tomb No. 2, at Dendra. It concerns the object which in *Royal Tombs*, p. 97, is described under No. 22 as "six-pronged fishing-spear" (Pl. XXXIV, 1, also depicted in BOSSERT, *Alt-Kreta*^{3}, fig. 176). Not only the site, in the interior of the country, argues against this designation, but also those objects with which it was associated not being indicative of any implement of a special trade but of a household utensil in general use. In reality we have here an illustration of Homer.

At the sacrifices made by Odysseus and Nestor bones enveloped in fat and covered with pieces of meat were burnt, and youths were standing by with *πεμπώβολα*. that is five-pronged forks, in their hands: Il. I, 463, Od. III, 460: *νέοι δὲ παρ' αὐτὸν ἔχον πεμπώβολα χερσίν.* Hesychios gives the following explanation under the word *πεμπωβόλους· πέντε ὀβελίσκους ἐκ μιᾶς λαβῆς συνεχομένους τριαινοειδῶς.* Our object, which had a wooden handle possibly attached by means of small nails even though the socket is short, has been a trident-like implement, not, however, with five, but with six prongs, thus properly speaking *ἐξώβολον* not *πεμπώβολον*. From the passage in Homer it is evident that the object in question is not a fishing-spear, but a sacrifical fork and probably also a fork with which the pieces of meat are turned over on the fire and the boiled pieces of meat were lifted out of the cauldron, for which purpose it is excellently suited with its crooked prongs. We have thus succeeded in relegating still another object described by Homer to the Mycenaean civilization.

HELBIG, *Das homerische Epos*, p. 353 ff., has connected *πεμπώβολον* with bronze implements found in Italic territory, especially in Etruria, that have five to seven prongs combined on a bronze ring which on one side terminates in a socket intended for a wooden handle. Here, however, the prongs are not placed at the point of the "fork", but on one side of the bronze ring, rather like the pegs of a rake, and the implement cannot in any way be described as *τριαινοειδής*. In the Italian examples — a similar form is depicted on a red-figured vase in Berlin, cf. FURTWÄNGLER, *Beschreibung der Berliner Vasensammlung*, p. 510, No. 2188 — I recognize a further development of the Mycenaean and Homeric implement.

4. The boars' tusks helmet.

In chamber tomb No. 8 numerous carved pieces of boars' tusks of different types were discovered, cf. above p. 45 ff., which had attached to a helmet of leather or of some other thick material, as is shown by string-holes and indentations on their rear surface. These are of exactly the same kind as those described by WACE, *Chamber Tombs*, p. 212 ff., Pl. 29, 30. The preserved pieces have been cut to fit one another so carefully that each piece fits only in its alloted place — put together they formed a complete covering without any gaps. The pieces that are pointed at one end, the tips of the tusks, were fixed to the top of the helmet and an abrasion at the very points shows where the crest holder has over-lapped the tusks. The intermediate pieces, squarely cut at both ends, were arranged in two rows, the upper with the concave side to the left, the lower to the right — some were still found in this relationship, cf. fig. 116. They comprised the two rows covering the helmet hood. The smaller pieces slightly curved and with squarely cut ends obviously belong to the cheek-pieces and were juxtaposed vertically in groups of three — this is shown by every third contact surface between the pieces. The remains in the tomb are sufficient for the reconstruction of an entire helmet, a splendid hunting trophy, for the production of which at least 30 to 40 boars must have been killed. Unfortunately, the limited time at our disposal for the conservation of the finds did not permit us to reconstruct the helmet, but its reconstruction, which can be effected in every detail, will be undertaken at the first opportunity. When this has been accomplished it will be possible to deal with the technical features in greater detail.

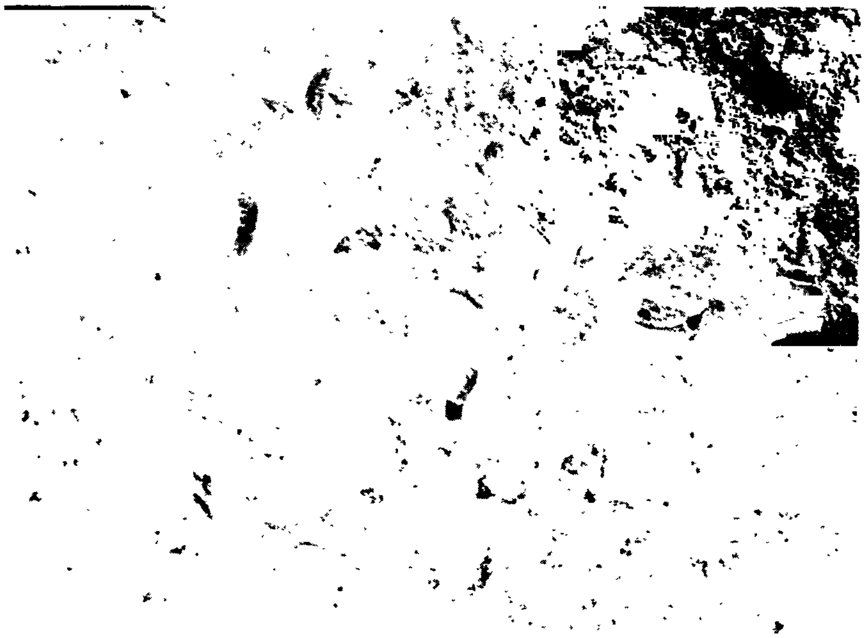


Fig. 116 Carved pieces of boars' tusks as found in chamber tomb No. 8.

This type of helmet is clearly differentiated from that which WACE reconstructed from pieces discovered in one of the chamber tombs at Mycenae, tomb 518, cf. *Chamber Tombs*, Plate 38, where all the pieces are perforated at each of the four corners. The same is true of several of the pieces from the Fourth Shaft Grave at Mycenae — in making trial excavations on the acropolis at Midea we have also found such a piece, cf. above p. 14, fig. 6: 4. WACE, who deals with the two helmet types in considerable detail, *Chamber Tombs*, p. 212 f., refers to REICHEL, *Homerische Waffen*^{2}, p. 101 ff., who in this connection has cited the well-known passage in Homer, Il. X, 261 ff., where there is a description of the helmet that Meriones lends Odysseus:

> -- -- . ἀμφὶ δέ οἱ κυνέην κεφαλῆφιν ἔθηκε
> ῥινοῦ ποιητήν· πολέσιν δ' ἔντοσθεν ἱμᾶσιν
> ἐντέτατο στερεῶς· ἔκτοσθε δὲ λευκοὶ ὀδόντες
> ἀγριόδοντος ὑὸς θαμέες ἔχον ἔνθα καὶ ἔνθα
> εὖ καὶ ἐπισταμένως· μέσση δ' ἐνὶ πῖλος ἀρήρει.

We now have a whole series of finds and representations of such helmets, most recently compiled by KUKAHN, *Der griechische Helm*, p. 3 f. Since many of the pieces in our tomb were obviously found *in situ*, we have attained perfect clarity, both as regards the use of the pointed pieces on the very top of the helmet, and with respect to the curvature of the lower rows, alternately to the right and to the left — ἔνθα καὶ ἔνθα. WACE, *Chamber Tombs*, p. 214, assumes that a new type of piece, quite small and triangular in shape, has been used to fill in the interstices. This seems to me to be out of the question, because the large pieces have been mutually fitted to one another by being cut in such a manner that no gaps could possibly have been left. These small pieces belong instead to a section protecting the back of the head, of the kind that is reproduced in f. inst. the ivory relief from Mycenae, cf. BOSSERT, *Alt-Kreta*^{3}, fig. 57. The protective part for the back of the head, which must necessarily have been more flexible, did not possess a continuous covering of pieces of tusks, but an arrangement of these in two or three rows, (cf. the relief from Spata, BOSSERT, *ib.*, fig. 60) with the points of one row directed upwards, and, to judge from the string-holes, their bases interconnected, in part overlapping each other, so that a projecting solid crest was formed.

It is as yet impossible to determine whether the two types of boars' tusks helmet should be chronologically differentiated. Both types, however, appear to belong to Late Helladic I and II, cf. WACE, *Chamber Tombs*, p. 210. The type reconstructed by WACE seems to be simpler and is assumed by him, *Chamber Tombs*, p. 58, to be older than the example with which we are dealing here. In the Fourth Shaft Grave at Mycenae, however, pieces were found belonging to two different helmet types. Personally I reckon with at least two helmets from this grave and cannot refer the pieces to one and the same helmet, as KARO has done, *Schachtgräber*, p. 218 — this being also indicated by the fact that four "Helmbuschträger" were found in the same grave, cf. KARO, *ib.*, p. 113, No. 532—535. True enough, those with perforated holes in all four corners for attachment belong, in my opinion, to a simpler type but this does not necessarily mean an older form. If the circumstances concerning the find in House *E* in Eutresis, belonging to Middle Helladic II, but which has undergone later alterations, cf. GOLDMAN, *Eutresis*, pp. 220, 52 ff., had been absolutely clear, these would have been support for dating the simpler type to Middle Helladic, for at Eutresis some pieces were found pierced through from front to back, cf. *ib.*, fig. 290. Further excavations will show if a difference in age really exists.

As regards the number of zones of pieces mounted on helmets of the more elaborate type, the known material reveals considerable variations. Our helmet has had three rows, the uppermost consisting of pieces with the one end pointed, the two lower rows with both ends squarely trimmed, and KARO obviously imagines the helmet from the Fourth Shaft Grave to have been made in the same manner. On the ivory head from chamber tomb 27 at Mycenae there are five rows, on the head from Spata, cf. *Bulletin de Correspondence Hellénique*, 1878, Pl. 18: 2, four or five, on that from Enkomi, MURRAY, *Excavations in Cyprus*, Pl. 2, probably four, on the representation *BSA* XXV, Pl. 37 *a*, three rows, on the gem from Vaphio, *Ephemeris Archaiologiki* 1889, Pl. 10, again three, on the silver vase from Mycenae, KARO, *Schachtgräber*, p. 119, Pl. 131, two rows. We thus have from two to five zones, probably, even if the older examples seem to have fewer zones, ultimately dependent on the size of the tusks.

The boars' tusks helmet is, as NILSSON, *Minoan-Mycenaean Religion*, p. 19 f., has rightly emphasized a special Mainland feature, an opinion which is shared by KUKAHN, *Der griechische Helm*, p. 5. EVANS' attempt, *Palace of Minos*, III, p. 98, note 1 and above all IV, p. 867 ff., to vindicate the Cretan origin of this type seems to me unsuccessful as regards the covering. The only real remains of boars' tusks as helmet adornments from Crete have been found in Tomb 55 of the Zafer Papoura Cemetery and this tomb is referred to Late Minoan III *a*, immediately succeeding the fall of the Palace, which in my opinion was caused by the expansion of the people of the Mainland — there is nothing to prevent us from considering the boars' tusks as evidence of this. The pictorial representations of helmets from seal stones, vases, and tablets, which EVANS cites, do not give any definite support to the assumption that they represent adornments made of boars' tusks. True enough, the helmet hood is subdivided into zones, but the nature of the covering, e. g. on the sealing from Hagia Triada, cf. EVANS, *Palace of Minos*, IV, fig. 856, rather leads one to think of small, oblong metal plaques. Among the Hittites there existed a helmet type with metal mountings, cf. f. inst. GARSTANG, *The Land of the Hittites*, Pl. LXIX, 2, showing some soldiers from the Yazili-Kaya reliefs wearing high helmets with vertical bar-like rifling, which BONNET, *Die Waffen der Völker des alten Orients*, p. 204, interprets as metal covering, no doubt correctly. On a later ivory relief for inlay from the West Palace Section at Knossos circles occur indicative of applied metal disks in horizontal bands instead of boars' tusks. The Minoan helmet which closely resembles in form the boars' tusks helmet has accordingly, in my opinion, been of leather or of some padded material, with horizontal ridges, sometimes with a covering of oblong or circular metal plaques.

The conical helmet hood may, in my opinion, have been imported from Crete, but the covering of boar's tusks I regard as a feature indigenous to the Mainland, easily explained by the fact that the boar must have occurred in far greater numbers in the widespread marshy thickets of Mainland Greece than in Crete.

I hope to have an opportunity of returning to our find in tomb No. 8 in the near future, when the helmet has been reconstructed.

5. Origin of the Ionic capital.

Our find of the ivory mountings of a wooden coffin in chamber tomb No. 8, cf. above p. 47, Pl. II, affords us sufficient reason for dealing with one of the most controversial subjects in Greek architectural history: the origin of the Ionic style. There can, however, be no question of taking up the discussion of the problem here in its entirety. I shall, therefore confine myself to a few incidental observations.

Hitherto, the discussion has centred upon whether the so-called Aeolian or proto-Ionic style is to be considered as a pre-requisite for the Ionic or whether the two East-Greek volute capitals are genetically independent of one another. The answers have been extremely diversified. The former alternative was advocated by CLARKE, who found the first Aeolian capital, which he called proto-Ionic, in Neandria, cf. *Am. Journ. of Arch.* II, 1886, p. 1 ff. The same fundamental viewpoint was later accepted by JULIUS LANGE in *Danske Videnskabernes Selskabs Skrifter*, Femte Række, *Hist. Philos. Afd.*, V, p. 115 ff., v. LUSCHAN, *Entstehung und Herkunft der jonischen Säule*, in *Der alte Orient*, XIII, Heft. 4, MEURER, *Vergleichende Formenlehre des Ornaments und der Pflanze*, p. 489 ff., and L. KJELLBERG, on the whole, is another adherent to this view, *Das äolische Kapitell von Larisa*, in *Corolla Archaeologica Principi Hereditario Regni Sueciae Gustavo Adopho dedicata* (*Acta Instituti Romani Regni Sueciae* II), p. 245. The other theory, that the two capitals are genetically independent, was championed by PUCHSTEIN, *Das ionische Capitell*, 47. *Winckelmanns Programm*, p. 56 ff., and KOLDEWEY, *Neandria*, p. 33 ff. No general agreement has, as yet, been reached, even if the former alternative seems at present to preponderate.

In the last decade the discussion has progressed along different lines, and a certain tendency to seek the origin of the two styles in the Near East with its floral ornamentation has become manifest, cf. W. ANDRAE, *Die ionische Säule*, PRZYLUSKI, *La colonne ionique et le symbolisme oriental*, in *Revue Arch.* 7, 1936, p. 3 ff. and SCHEFOLD, *Das äolische Kapitell*, in *Jahreshefte des Österreichischen archäologischen Institutes* XXXI, 1938, p. 42 ff. The latter declares in summary that the two styles are not "wesensverschieden", but "Gestaltungen derselben 'Urpflanze' — orientalische Schmuckmotive, die den grieschischen Formen zugrundeliegen, sind längst erkannt".

This Oriental floral ornamentation, considered as an original source of inspiration, seems highly alluring with regard to the Aeolic capital, but I have greater difficulty in accepting it as the root of the Ionic, at least as its only root, and I can under no circumstances accept the theory that the Ionic capital has developed from the Aeolian.

With regard to the Ionic style it has been emphasized — with entire justification, as far as I can see — that the volute capital, *hoc est* the volutes, cymation with egg-moulding, and "Zwickel"-filling, constitutes the basic element of the style, cf. v. LUSCHAN, *op.c.*, p. 7 f. v. LUSCHAN wished to discern in this "einfach die Krone der Dattelpalme"; PUCHSTEIN regarded it as a lily. Actually we do not possess the Ionic architectural style as a whole, but all the constitutive elements of the Ionic capital are present within the Aegean region as early as the late Bronze Age and thus, the oldest preserved Aeolian capital from the beginning of the 6th century B.C. can hardly be called 'proto-Ionic'.

On the ivory mountings on our wooden coffin from tomb No. 8 exactly these elements occur, volutes with 'Zwickel'-filling connected by an intermediate segmented element. As has been emphasized above p. 47 our mounting is by no means unique, cf. above all WACE, *Chamber Tombs*, p. 84, fig. 30. From tomb I: 2 in Asine we have another type of inlaid work on a wooden coffin, nine flower-buds with projecting stamens in the middle and two well-developed volutes, with round rock-crystals as mountings in the eyes, cf. *Asine*, p. 387, fig. 252 — for the arrangement cf. a similar coffin from the Tomb of the Tripod Hearth in the cemetery of Zafer Papoura, *Archaeologia* LIX, 1905, p. 434, fig. 40. These flowers with voluted exterior petals, obviously with a lily as their prototype, are the closest models I know of the Aeolian capital. In the descriptive account, p. 47, we have emphasized that the volutes on the new mounting from tomb No. 8 have their closest analogies in the whorl-shells, adorning the royal draughtboard from the throne room in Knossos, cf. EVANS, *Palace of Minos*, I, p. 474. Thus it is of the greatest importance to be able to state that these artistic motives, very similar though not identical, may be arrived at from entirely different points of departure, in one instance a flower, in the other a shell. This fact should prompt a certain caution, when it is a question of determining the origin of a linear ornament.

In this connection it is necessary to emphasize that the volute does not originate in floral ornamentation alone. EVANS, *Palace of Minos*, IV, p. 110, has called attention to the significance of the whorl shell motive with regard to the origin of the spiraliform patterns, and this, of course, particularly applies to volutes of the kind dealt with here. The natural "Zwickel"-filling afforded by the shell cannot be disregarded in this connection. A fact which also deserves to be explicitly emphasized is that the spiral eye of our mounting already has a rosette as filling — exactly like the later Ionic capital in its classical form, e.g. in the North Porch of the Erechtheion. On our coffin mounting we even have the forerunner of the cymation with the egg-moulding in the segmented torus visible between the volutes — placed, be it noted, in just the position between them that is later occupied by the cymation.

In referring to this, I have only wished to call attention to a possibility that has been too little considered in the discussion of the origin of the Ionic style. When it is a question of the evolutionary history of the volute capitals, we do not necessarily, nor exclusively, have to turn to the Orient. But how shall we explain the fact that all these elements which occur fully developed in the Minoan-Mycenaean civilization could disappear and come to light again in classical art, where they attain their fully developed form? If there really is a connection, they must have led an existence hidden from view during several centuries. Our material from the older period indicates that they existed on *wooden* boxes or coffins, probably often in the shape of pure wood-carvings [1]. I have already intimated in another context, *Les relations entre La Grèce et l'Asie Mineure aux temps préhistoriques, surtout en vue des fouilles projetées à Milas en Carie* (II$^{\text{me}}$ Congrès turc d'historie 1937), that much speaks for such a concealed existence of Minoan-Mycenaean cultural elements in the Near East, above all in Cyprus and in Syria and probably also on the west coast of Asia Minor, especially in its southwest corner, ancient Caria, the investigation of which is one of the most urgent tasks of Aegean prehistoric archaeology. These survivals flowered again in Archaic Ionic art during the so-called Orientalizing Period. Minoan-Mycenaean art has mainly been a "Kleinkunst", Ionic art gave monumental expression to the traditional forms known for hundreds of years.

---

[1] It is very interesting to find exactly the same volutes in gold, d. 4 cm., among the gold and ivory objects found at Delphi, cf. *Bulletin de Corresp. Hellén.* 1939, p. 102, Nr. 53, pl. XXXIV. There it is suggested that they once adorned a throne "on songe au montant du pied d'une trône (deésse de Locres à Berlin)."

6. The gold ring.

The religious representation so rich in details that occurs on the gold ring from chamber tomb No. 10, deserves a somewhat more extensive commentary than the description given above p. 81. Cf. Pl. VII: 1, *a—c*.

The shrine on the left is comprised of two elements, the isodomic structure, and the colonnade behind adorned with horns of consecration. As regards the isodomic structure a cult building is suggested of the kind we know from the gold-plates found in Shaft Graves III and IV at Mycenae and from a gold-plate found in the bee-hive tomb at Volo, as well as from representations in the wall-paintings from Knossos. The representations cited above show the frontal aspect of the building, on our ring we see it from the side. In view of the small proportions of the building clearly indicated by the comparative size of the female figures, I remind the reader of parallels from Knossos, cf. EVANS, *Palace of Minos*, II, p. 524, namely a clay seal-impression showing part of a shrine and an adorant who is considerably taller, *ib.*, fig. 326, and a clay matrix from a signet, *ib.*, II, p. 767, fig. 498, showing the goddess seated on a small pillar shrine [1]. The model supplied by the Miniature Fresco from Knossos cannot have been much more than 2 ½ m. high to judge from the surrounding figures, somewhat less than the columnar shrine, of which EVANS has found traces on the west side of the Central court at Knossos, cf. *Palace of Minos*, II, p. 806.

Under such circumstances it cannot be a question of a building in which a cult ceremony has taken place, the latter being enacted *in front of* the building. It has probably had as its main object a symbol, an aniconic representation of the deity, the pillar in the pillar shrine. The building was certainly an imitation of the dwelling-house common in Crete, cf. the house faiences from the Town Mosaic, EVANS, *Palace of Minos*, I, p. 301 ff., fig. 223, and the gold-plates showing Cretan influence. On our ring this building and the colonnade visible behind it, are mutually related as is evident from the fact that the horns of consecration, the sacred symbol, are placed on the latter, not on the shrine itself, as is usually the case. In such an instance as this, one readily takes the building for an altar[1], and we actually have altar structures built in the same manner with square blocks and a covering slab, projecting a little beyond the stone structure, and forming a cornice; cf. a fragment of a steatite pyxis from Knossos, there crowned by horns of consecration, EVANS, *Palace of Minos*, II, p. 614. As to the question of the horns of consecration and the façade of the Minoan shrine, compare in addition NILSSON, *Minoan-Mycenaean Religion*, p. 140 ff.

---

[1] A shrine of the same kind as on our ring with a similarly massive isodomic structure with projecting cornice, occurs on the so-called "Ring of Minos" from Knossos, cf. EVANS, *Palace of Minos*, IV, p. 947 ff., where the goddess is represented seated on the higher middle part of the shrine with her feet resting on one of the lower wings. The shrine depicted here is also smaller than the goddess. In my treatment of this ring in *The Religion of Greece in prehistoric Times*, however, I have attempted to prove that this ring is spurious.

In view of what has been said above, it is easier to understand the figure in front of the shrine. Like the shrine she is seen in complete profile with her arm raised exactly like the women on a signet ring from a chamber tomb at Mycenae, illustrating the adoration of a sacred spring, the water descending from a height within a walled temenos, cf. EVANS, *Palace of Minos*, III, p. 137 f., fig. 89. Her attitude close by the shrine may also be compared with the fragmentary representation on a Late Palatial seal impression from Knossos, cf. EVANS, *Palace of Minos*, II, p. 524, fig. 326, in this instance, however, with the difference that both adorant and shrine on our ring are seen wholly from the side. As regards the pose of the head, compare also a seal impression from Hagia Triada, NILSSON, *Minoan-Mycenaean Religion*, p. 150, fig. 39. The fact that she is dressed in an animal skin, characterizes her as a religious ministrant, illustrating the widespread practice of votaries wearing the skins of their offerings, cf. *Monumenti Antichi* XIX, p. 18 ff.; NILSSON, *Minoan-Mycenaean Religion*, p. 132 ff.; PERSSON, *Åkerbruksriter och hällristningar*, in *Fornvännen* 1930, p. 7 ff. We have to imagine the lower part of the body of the officiant as attired in a hide or skin with the tail plainly visible close by the base of the complete column, and identical to the officiants on the well-known Hagia Triada sarcophagus. The small indentations that are irregularly scattered over the smooth surface above the legs and the tail probably indicate the shaggy pelt with its gradations of hues as on the sarcophagus — probably, to judge from the tail, it is a goatskin in both instances. Between the upper large indentation and the upper part of the shaft of the column a row of shallow indentations appears, a customary device in the delineation of loose flowing hair.

I wish to retract here a simple explanation which I was first tempted to offer in regard to the objects between the building farthest to the left and the column. The almost obliterated lines in the intermediary space may at a first glance be imagined as flying birds, and since the building itself has been associated with the tripartite shrines, I especially remind the reader in this connection of the gold-plates from Mycenae, where doves sit on the two lower buildings. "The birds" would in such a case personify the epiphany of the deity, present because of the cult ceremony staged in front of the building. Further, in representations of this kind flying birds are rarely seen — they are usually represented sitting. Yet, a flying bird actually occurs on a gold ring from the necropolis in Phaestos, cf. NILSSON, *Minoan-Mycenaean Religion*, p. 231, fig. 74. It also seems probable to me that the two doves represented on the gold-plate from Mycenae ought in reality to be imagined as flying; for technical reasons they have been placed on the outer horns on the two lower parts of the shrine. Their extended wings might indicate that the doves were just alighting, but for technical reasons it was impossible to render them in the flying schema usual in the Minoan-Mycenaean style with the wings seen wholly from below, compare our silver cup below p. 140 and the Phaestos ring, because they would thus have been unnaturally supported on a wing-tip. What might be taken for birds at a first glance is, however, interpreted in the appended drawing as the most deeply engraved parts of an officiating devotee, an interpretation resulting from a control examination by a magnification × 15 of both photograph and galvanoplastic copy.

---

[1] Cf. NILSSON, *Geschichte der griechischen Religion*, I, p. 799, in *Handbuch der Altertumswissenschaft*, V, 2, 1

The dancers are two female figures in flounced skirts seen en face, but, according to the artistic convention, with the feet and the head in profile, an attitude very characteristic both of Minoan and of Egyptian art. The relatively short skirts are a Middle Minoan III feature in Crete, cf. EVANS, *Palace of Minos*, III, p. 61. A ritual dance frequently recurs in the religious representations on the gold rings. The dancing human figures themselves are possessed by the spirit, the orgiastic dance, together with the chants that accompanied it, being the obvious vehicles of incantation. The ecstatic dance reveals one of two well-known aspects of the nature cult; the other is the mournful lamentation. Thus, it is associated with the tree cult, cf. NILSSON, *Minoan-Mycenaean Religion*, p. 236. For the rôle the dance played in classical times in connection with Ariadne, cf. NILSSON, *op.c.*, p. 452, in connection with Artemis, *ib.*, p. 433. Both these deities are certainly descendants of the ancient Cretan Great Nature Goddess, who was undoubtedly worshipped in the form of a tree within a sacred enclosure, *op.c.*, p. 225 f., as well as in many other ways. With regard to the enclosure cf. especially NILSSON, *op.c.*, p. 232.

A baetylic stone is to be seen within the enclosure, on our ring. The representation is that of a relatively small elliptical stone of the kind that has been found in different strata, e. g. in Asine, cf. *Asine*, p. 247 f., where several other, similar stones are also mentioned, VALMIN, *Messenia Expedition*, p. 341 f., BRONEER, *Hesperia* II (1933), p. 342 f., fig. 14, and for finds in Cyprus cf. SJÖQVIST, *Die Kultgeschichte eines cyprischen Temenos*, in *Archiv für Religionswissenschaft* XXX, p. 317. The stone from Asine was found on the summit of the Barbouna mountain within a temenos containing a small shrine, dating to the Archaic Period to judge from the surrounding finds — which included a small leaden figure of an archaic Apollon. It associates the omphalos and baetylus.

The baetylic stone, as the aniconic image, is the actual habitation of the divinity, to which he may be brought down at any time by the appropriate ritual, cf. EVANS, *Palace of Minos*, I, p. 160. Both the Paphian Aphrodite and Astarte of Byblos have baetylic images and are accompanied by a youthful male consort with a similar baetylic equivalent. The earlier aniconic cult image is explained by later tradition as the gravestone of a divine personage, cf. Delphi, Amyklai, and at Knossos the tomb of the Cretan Zeus; cf. EVANS, *Palace of Minos*, II, p. 838. On a wall painting from Knossos a regular omphalos with fillets is represented providing still further confirmation of the above and shedding light upon the ancient tradition of Delphi's relations with Crete. Regarding the whole problem cf. EVANS, *Mycenaean Tree and Pillar Cult*, especially p. 170 f., in *Journ. of Hell. Studies* XXI, p. 99 f., where i.a. a gold ring from Knossos is dealt with, on which there occurs a scene of stone or baetylus worship associated with the tree cult. The baetlyus has here the conical outline that is characteristic of the oldest baetyls in later representations of the sacred precinct at Paphos in Cyprus.

The religious ceremony that is performed close by the shrine represents a moment in the worship of the aniconic deity.

I have treated our ring in connection with other and similar rings in my *Sather Lectures, The Religion of Greece in prehistoric Times*, Berkeley—Los Angeles 1942.

7. Translation of metal forms to pottery.

One is accustomed to find in archaeological literature more or less convincing statements expressive of the opinion that a piece of pottery has a metallic prototype. Certain archaeologists are favourably disposed towards conclusions of this nature, others view them more sceptically. Reliable proofs are difficult to adduce except in those instances in which certain details essential to metal-work, such as rivets with their heads, are plastically rendered in clay. However, from shaft II in Chamber tomb No. 10 we have an exceedingly instructive illustration of this kind of translated technique.

As has been mentioned above, five silver vases were found in the shaft, and all possessed direct counterparts in clay in the same shaft. One might simply speak of one set intended for festive occasions, one for everyday use. In fig. 117 I have placed the corresponding clay vases immediately below the silver vases. There can be no doubt that the silver vases with their finely curved contours and their thin, broad handles are the primary ones. It is interesting to perceive that the vases lose part of their original elegance and that their unitary quality becomes less pronounced when translated from the ductile, flexible metal into the heavy, moulding clay.

We have here clear evidence that the original prototype of the stemmed goblet is of metal, a prototype that has also been discovered in other places, cf. EVANS, *Palace of Minos*, IV, p. 363 ff.; WACE, *Chamber Tombs*, p. 148 f. That such must be the case is indicated by the very shape of the vase with its broad, flat foot and its slender stem supporting the bowl. Neither foot nor stem can seem functionally proper to him who thinks exclusively in forms appropriate to clay; they are of too delicate a nature for this brittle material, as every archaeologist in the field learns to know in ample measure through the quantities of broken vases of this kind that are found in Mycenaean strata and tombs. The elegant form is created for the solid, yet flexible metal plate, which could easily be chased into the desired shape. But the form was attractive and had therefore aroused the desire to create a more aestetic everyday ware, whereby, however, much of its elegance has been lost[1]. We can see how the stemmed goblet is gradually coarsened, how the stem grows ever thicker and the bowl by degrees becomes shallower, and how the curved side acquires a sharply angular shoulder — here not an evidence of direct translation from metal, as has been maintained regarding certain Minyan vases.

---

[1] On this point I support another view than FURUMARK, *Mycenaean Pottery*, p. 56 ff

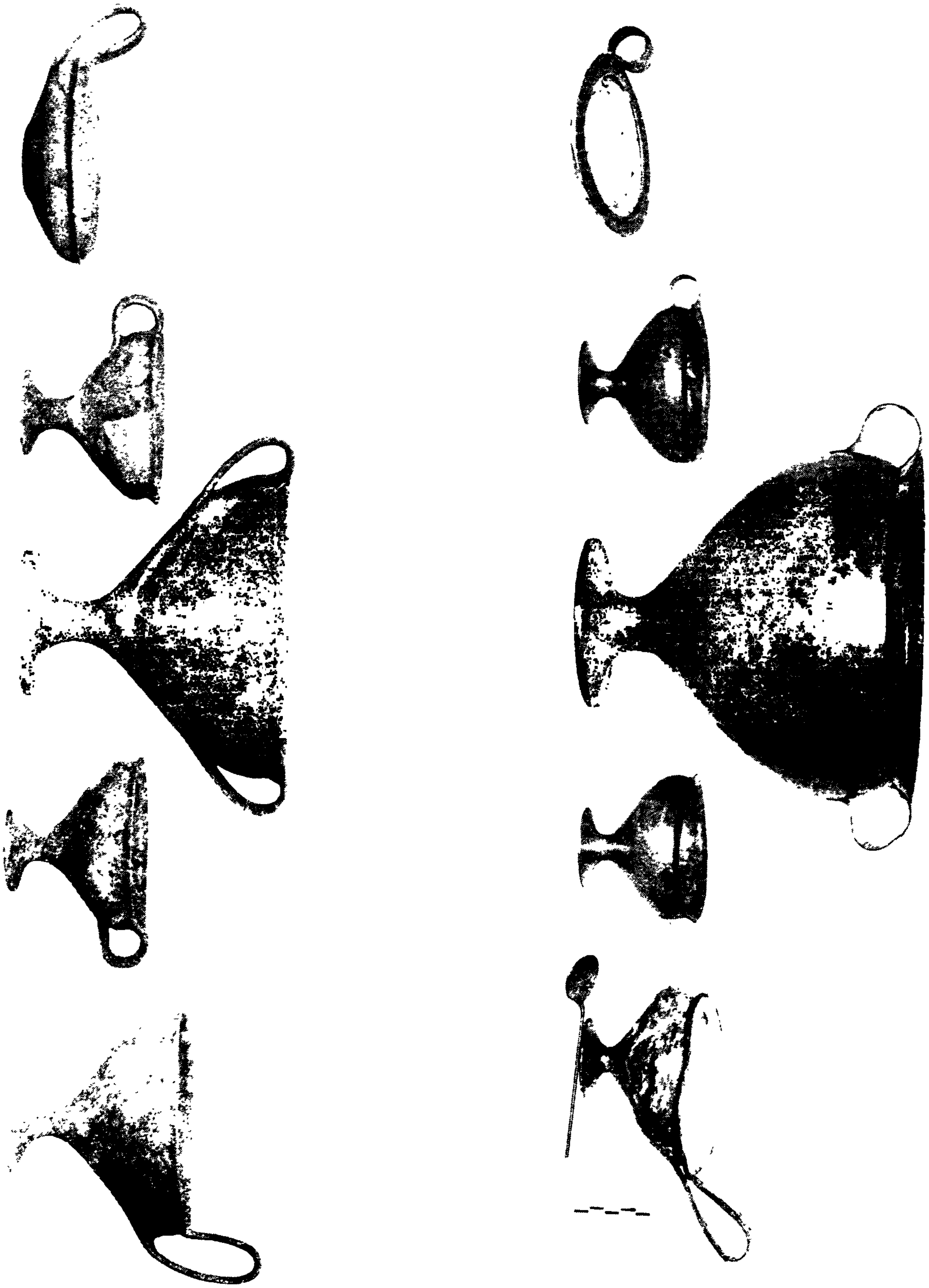


Fig. 117. Silver vases (above) with their counterparts in clay (below) from shaft II in chamber tomb No. 10

In a greyish incrustation that covers several of these goblets WACE, *Chamber Tombs*, p. 182 f., has wished to see "remains of some unfixed paint or similar substance intended to give these clay vessels the appearance of vases of metal, perhaps silver." It is exactly those clay vessels from our shaft which are counterparts of silver vases that have this greyish incrustation, cf. above p. 92 f., Nos. 41—45. WACE's alternative theory that the incrustation constitutes remains of an "adhesive for affixing gold leaf so as to imitate actual gold cups of this shape", cannot be accepted, at any rate not in this instance, where the goblets were undoubtedly found in the position in which they had been placed, without any trace of gold leaf being present.

It is hardly necessary to point out that the high, flattened handles, which occur on older stemmed goblets, are elements which, like the flaring rim, are taken over from the metal technique. The handles are too slender to have been conceived in clay. Our comparative material illustrated here shows that the small, low loop-handle, which also occurs on the stemmed goblet in its later phase of development, had its original prototype in metal models.

The open shallow saucer with ring-handle is one of the most frequent types in the repertory of the metal vases, cf. EVANS, *Palace of Minos*, II, p. 637 ff. The ring-handle and the broad, horizontal rim which are characteristic of these vases, are even occasionally translated into clay, but in this material the high loop-handle is more frequent than the ring-handle and the broad flaring rim more common than the horizontal one. However, there can be no doubt that the clay type was formally dependent upon metallic forms.

On this problem of metal vases imitated in pottery cf. EVANS, *Palace of Minos*, I, p. 242 f., especially "egg shell class", for the tortoise shell ripple ware in imitation of fluted metal work, *ib.*, IV, p. 121, and concerning metal-work origin of ewer, *ib.*, IV, p. 127.

8. Silver vase with representation of birds.

On a stemmed goblet with high loop-handle from chamber tomb No. 10, cf. above p. 89 f., No. 37, Pl. VI: 1, a peculiar representation occurs on a broad decorated belt between two segmented ribs. As far as I know, it hitherto lacks true parallels, and, accordingly, when viewed cursorily presents a rather strange appearance, but a closer analysis shows that it is composed of elements well known in the older Mycenaean repertory. For the decorated zone cf. Frontispiece.

1. *The scale-pattern.* The decorated zone is completely covered by a scale-pattern executed in *repoussé*, but the scales do not overlap, nor are they regularly arranged, and even their size varies. Their shape leads us to suppose that they were intended to represent the waved surface of the sea.

Originally a simple scale ornament was used as an indication of the rocky surface of the ground, and this convention is of very early date in the Orient. The pattern is already met with in Sumerian art in the Third millennium B.C., e.g. on a plaque in the Louvre, representing a votary before a goddess seated on rocky ground, indicated by this scale pattern, cf. EVANS, *Palace of Minos*, I, p. 313, fig. 232 [1]. The same conventionel schema is met with later in Assyrian and Phoenician art, and it was adopted by the Minoans, cf. the Minoan goddess on the peak, covered with scales, flanked by the two lionesses, cf. EVANS, *Palace of Minos*, II, p. 809, fig. 528, or the faience relief with the goat and kids, cf. f. inst. BOSSERT, *Alt-Kreta*³, fig. 260.

This scale-pattern has been taken over from the rocky land surface to indicate the sea bottom formed of rocks, pebbles, and sand on the octopus bowl from Dendra-Midea, cf. *Royal Tombs*, Pl. IX—XI. There, both above and below, the bottom of the sea is suggested by irregular, alternating plain and stippled scales, the plain probably representing the stones, the sand between them stippled. In a further evolution, which, no doubt, had occurred as early as the transitional Middle Minoan III-Late Minoan I *a* period, cf. EVANS, *Palace of Minos*, IV, p. 955, the same scale-pattern acquires a more decorative reticulate form as an indication of the uneven and irregular surface presented by the sea waves, as it is met with on the silver rhyton from the Fourth Shaft Grave at Mycenae where naked men, depicted across the reticulate pattern, swim towards the shore where the siege scene is enacted, cf. KARO, *Schachtgräber*, Pl. CXXII (Fig. 133). EVANS, *Palace of Minos*, III, p. 100, has aptly paralleled this representation with a fragment of a steatite rhyton from Knossos, presenting an archer, disembarking from a boat, with identical wave-pattern behind him, and projecting rocks of more irregular but conventional scale-shaped outlines. A painted design with the same reticulate wave-pattern occurs on a pear-shaped rhyton from Pseira of Late Minoan I *b* date, cf. SEAGER, *Pseira*, p. 29, fig. 10, EVANS, *Palace of Minos*, II, p. 509, fig. 312 *f*, here with dolphins in the intervening spaces. It is possible that the stippled surface within the reticulate pattern is intended here to indicate the sandy bottom, like certain sections on the golden octopus bowl from the Kings' Tomb at Dendra.

Exactly the same rendering of the background by means of small, irregular scales on our silver goblet is met with on a stirrup vase from Late Minoan II *a* found in Knossos. A cephalopod with only four tentacles swims in the sea, indicated by a kind of irregular scale-work covering the whole background, cf. EVANS, *Palace of Minos*, IV, p. 353 ff., fig. 298. On a gold-plate from the door-way of Atreus' tomb a fine spiral and papyrus pattern appears against an exactly similar, scaly background, cf. EVANS, *ib.*, IV, p. 243, fig. 184 — also here evidently intended to suggest water in connection with the papyrus motif.

Later, water or waves may be rendered with fan-like groups of short bent lines, set in different directions, as on a small amphora from Asine, where such groups are arranged around octopuses, cf. *Asine*, p. 359, No. 4, fig. 233: 4. During Late Minoan III other ways of representing water also occur, especially in connection with waterfowl, either by parallel wavy lines, according to the Egyptian convention, or by the introduction of a fish below or beside the waterfowl, cf. EVANS, *Palace of Minos*, IV, p. 336 f., fig. 280. It is of particular interest to note that both these methods of indicating water, merely by means of an expressive sign and not by an filling-in of the whole background, survive and play a great rôle in Geometric decoration, cf. S. WIDE who was the first to point out the survival of the wavy lines, *Nachleben mykenisher Ornamente*, in *Ath. Mitt.* 1897, p. 233 ff.; SAVIGNONI in *Monumenti Antichi* XIV (1904), p. 573.

---

[1] For the treatment of this subject see also A REICHEL, *Studien zur kretisch-mykenischen Kunst*, in *Jahreshefte des Österreichischen archäologischen Institutes* 1908, p 251 ff

2. *The rock borders.* The impression of water that the scale-pattern imparts, is strengthened by those formations, trisected at their point, most closely resembling corals that hang down from the two ribs and which also project upwards into the decorative zone proper from the lower rib. A striking feature in the treatment of rock-landscapes is the manner in which the rocks are made to descend from above, in this way showing, in inverted fashion, the farther boundary, e.g. on the Vaphio cups. Often the rock outlines have become rounded off and conventionalized. Similar rock borders are also commonly associated with marine subjects e.g. in the faience composition with flying fish from the Temple Repository at Knossos, EVANS, *Palace of Minos*, I, p. 520, fig. 379. On gem impressions from Middle Minoan II we already find many examples of similar rock-work of marine character, and EVANS rightly speaks of an artistic passion of the Minoans for rock scenery, *Palace of Minos*, II, p. 453; cf. also octopus and corallines on a Middle Minoan III fragment of a steatite rhyton from Knossos, *ib.*, p. 503, and dolphin and rocks on another steatite fragment from Knossos, *ib.*, p. 504. These marine designs have been taken over from intaglios and reliefs, in soft stone, and executed in *repoussé* metalwork. Steatite vases with reliefs plated with gold have constituted the connecting link; cf. the seal of steatite from Palaikastro, where a thin gold plating has been carefully impressed into the engraving of dolphins swimming among rocks, EVANS, *Palace of Minos*, I, p. 675, fig. 495. In the next stage the vessel itself is entirely executed in gold or silver plate, cf. the gold cup with dolphins and rocks in *repoussé* work of Late Helladic I date from the Third Shaft Grave at Mycenae, KARO, *Schachtgräber*, Pl. CIII, No. 73. A somewhat later phase in the evolution is represented by the golden bowl with octopuses from the bee-hive tomb at Dendra-Midea, *Royal Tombs*, Pl. IX—XI. There the seascape has become softer; sea-anemones and vegetable shoots appear on the rock work in place of corallines and seaweeds.

The medallion-like fields reserved in the main zone, each in the shape of quatrefoils with two larger and two smaller double contour lines, have the same trefoil-like coral forms at the junction inside the medallion-like fields. The arrangement of these five fields seems strange at first sight, but a closer examination shows that actually it is merely a more rigorous conventionalization and geometrizing of the pictorial field round the bodies of the birds, and of the frame as it is to be seen around the four fields with octopuses on the gold cup from Dendra just mentioned. There, too, we have the same trefoil-like coral forms, treated in a freer manner, however, and mainly inserted as filling between the tentacles. I do not hesitate to regard this arrangement on the bird vase as a further development, a stricter conventionalization, of the freer treatment of the same motive, that is found on the octopus cup, however different the impression may by in its entirety.

3. *The birds.* It is an interesting fact that the higher animals, including man, are absent in vase decoration in Crete down to Late Minoan III; it is only the marine fauna

that is met with earlier, and occasional waterfowl in this connection. Therefore, when representations of men and higher animals occur on metal vases, as on the Vaphio cups or the silver vessels with siege and battle scenes from the shaft graves at Mycenae, we may be absolutely certain that they have their decorative models in some other art than pottery.

The five birds in their medallion-like frames I interpret as a flight of waterfowl and their arrangement in a zone with a clear border at the top and at the bottom is reminiscent of a frieze, comparable with the Partridge Frieze from Knossos, EVANS, *Palace of Minos*, II, p. 109 ff., dated to the middle of the sixteenth century B.C.

The appearance of the birds with their spool-shaped bodies, large wings, short necks, large heads and short legs, does not leave any doubt that we are concerned here with flying waterfowl. It is extremely probable that they are a species of Nile ducks. For Nile ducks first begin to appear in vase painting in Crete during Late Minoan II, putting an end to the previously prevalent taboo on animal and human designs. They appear on certain vases of the so-called Palace Style type, cf. EVANS, *Palace of Minos*, IV, p. 329 ff. The waterfowl had a long vogue among intaglio types both in Crete and in Mycenaean Greece, usually associated with papyrus clumps, cf. EVANS, *ib.*, III, p. 116 f.

As regards the flying schema of the Minoan-Mycenaean art, we have here, with reference to the sky-line, to distinguish two different types, one with wholly preserved natural profile, also of the wings, and another representing the body in natural profile, but with the wings as seen from below in their complete, characteristic extended position.

The natural profile occurs on a seal-impression, cf. EVANS, *Palace of Minos*, II, p. 766, fig. 497, in transitional Middle Minoan III — Late Minoan I style, showing a female figure with two swallows, one being bound on the end of a line, with rock-work below. Exactly the same flying scheme is met with on the gold-plates from the Third Shaft Grave at Mycenae, the naked lady with three doves, cf. f. inst. BOSSERT, *Alt-Kreta*³, fig. 194 *e*, and the gold-plate with shrine and doves, *ib.*, fig. 189. That it is here actually a question of a flying schema, not of resting birds — cf. above p. 133 f. — is evident from the first plate, where two of the doves are represented floating in the air entirely free, only connected to the elbows of the naked woman by their tails. This flying schema becomes predominant during Late Minoan III, cf. EVANS, *Palace of Minos*, IV, p. 337, fig. 280, and it is this motif that the Geometric decorative style adopts, together with the method of depicting water, current in the same period.

The other flying scheme, which follows more closely the method characteristic of all primitive art of reproducing the different elements of a representation from their characteristic angle, at the expense of the realism of the whole — in other words: as much as possible as clearly as possible — represents the one wing above, the other below the body rendered in profile, the wings seen from below with the quills clearly marked. In older times this is the ordinary schema for flying, which is evident from the representations of flying fish, such as those that occur in the Phylakopi Fresco, on the inlaid bronze blade from Vaphio, and also on seals, cf. EVANS, *Pa-*

lace of Minos, III, p. 128 f., figs. 82, 84. The flying swallows in embroidered design on a lady's robe from a fresco found in Phylakopi, certainly like the Flying Fish Fresco which is work of the Knossian School going back to the earlier phase of Middle Minoan III, cf. EVANS, *ib.*, III, p. 40 ff., fig. 26, are conventionally rendered in the same way — approaching closely to the flying swallow met with on a Middle Minoan III prism-seal from the Candia district, EVANS, *ib.*, IV, p. 449, fig. 374 *b*. The bird on a seal-impression from Hagia Triada shows a freer and more artistic form, *ib.*, IV, p. 490, fig. 424, even if the conventional flying schema has been retained. The same may be said of the flying Nile ducks of the 'Nile Piece' on the well-known dagger-blade from Mycenae, KARO, *Schachtgräber*. Pl. XCIII—IV. Quills as well as tailfeathers are here marked as on our silver cup.

Finally, as regards the legs of the flying birds, these are not generally depicted, though exceptions occur as on the Middle-Minoan III seal with a flying swallow, on the 'Nile Piece', and on the gold-plates from Mycenae. On our silver vase the leg posture is rather that of a swimming bird, cf. EVANS, *Palace of Minos*, IV, p. 335, fig. 278. The same scheme is met later during Late Minoan III, cf. *ib.*, p. 337, fig. 280, and thenceforth survives as an element in the Mycenaean heritage found in the Geometric Style.

As this analysis of the various elements of the representation shows, our cup, in spite of its strangely suggestive total effect, must be a Mycenaean work of art, the very shape of the vase also being typically Mycenaean. The analogies which it has been possible to point out in comparing the representations on the silver cup from the Queen's tomb at Dendra with those on the gold cup with the octopus decoration from the King's tomb on the same site, seem to me particularly interesting, because they confront as with the question of import or local manufacture.

9. Importation or local manufacture.

The rich and varied finds that were made at Dendra in the excavation of the bee-hive tomb and the chamber tombs, confront us with the question whether we have to deal with the products of local workshops, established in connection with the castle on the acropolis of Midea, or with imports. Especially with regard to objects of precious metals reflecting a highly developed craftsmanship a tendency formerly prevailed to reckon, very extensively, with a foreign, especially Cretan, origin as regards the Greek Mainland, e.g. cf. KURT MÜLLER, *Frühmykenische Reliefs aus Kreta und vom griechischen Festland*. in *Arch. Jahrb.* 1915, p. 242 ff. A survey of the finds from Dendra, particularly with regard to their ornamentation, appears to me to shed new light on this question.

The newly discovered gold cup, published above p. 74 f., has, as already pointed out, a handle which terminates in a double papyrus capital at its lower end (Fig. 118: 5), an ornament that, of course, has its primary prototype in Egypt. It is true that the papyrus motif occurs also in Crete, where it makes its appearance in ceramic decoration in Late Minoan

I, after having appeared on wall paintings as early as the preceding period, Middle Minoan III, cf. EVANS, *Palace of Minos*, II, p. 477. EVANS combines his so-called 'ivy leaf'-motif with the papyrus ornament, a derivative of the sacred *uaz*- or papyrus sceptre motif. The arrangement found on the handle of our new gold cup is, however, of an en-

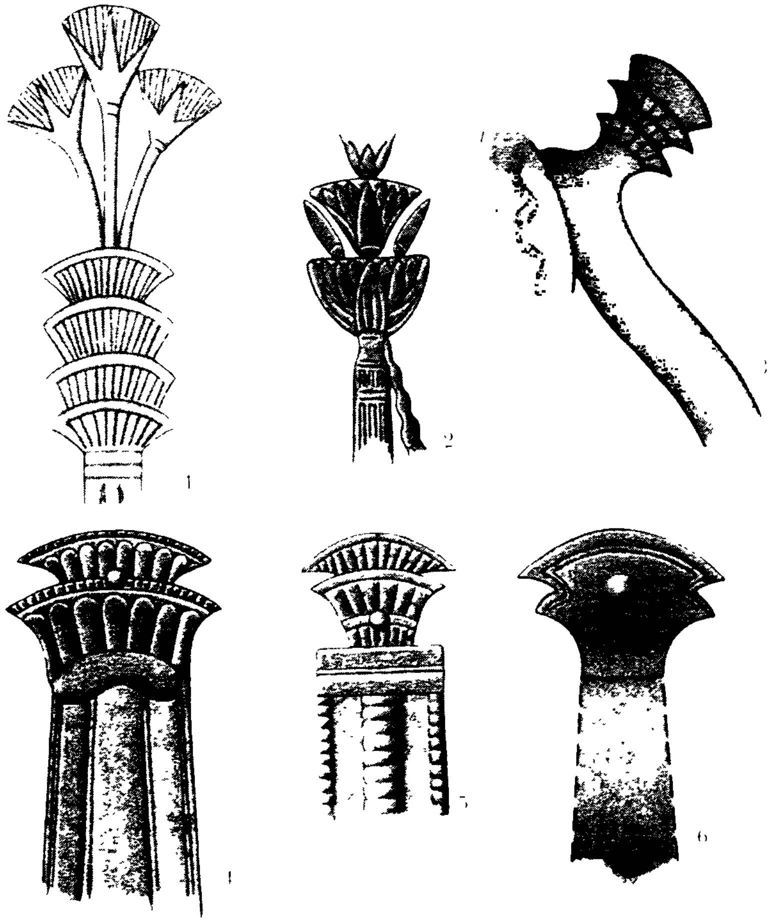


Fig. 118 1 Egyptian bouquet from papyrusdrawing.
2 Egyptian column with double lotus capital.
3 Vase handle on a Minoan fresco
4 Handle of the 'octopus cup' from the bee-hive tomb at Dendra.
5 Handle of gold cup from chamber tomb No 10
6 Handle of silver vase from the Royal tomb at Isopata

tirely different nature. It is met with in the same form on the King's great gold cup with octopus decoration from the bee-hive tomb, cf. *Royal Tombs*, Plate XI (Fig. 118: 4), and as already noted it has its closest parallels in double flower-shaped capitals from Egypt of a type that became common during the New Kingdom; cf. also v. LUSCHAN, *Die jonische Säule*, p. 33 f., fig. 33: an Egyptian column with fluted shaft, papyrus tuft and two lotus capitals placed one above the other from a tomb of the 20th dynasty (Fig. 118: 2) (here moreover a typical "lily capital" is included and above this, in addition, a calyx supported by two uraeus snakes). The origin of the Egyptian double capital is to be found in the bouquet, as seen for example on a papyrus drawing from the New Kingdom reproduced by MEURER, *Vergleichende Formenlehre des Ornamentes und der Pflanze,* p. 458, fig. 12 (Fig. 118: 1). On the bouquet the circles beneath the 'capitals' have their real function of bands holding together the stems, which have left their traces in the fluted column shaft.

I do not know of any parallel to our cup handles from within the Aegean sphere of civilization, either from the Mainland or from Crete, except in the representation of a mottled stone vessel on a fragment of the Procession Fresco, cf. EVANS, *Palace of Minos,* II, p. 724, fig. 451 (Fig. 118: 3), but vase as well as handle have here a quite different form, and the papyrus capital is even triplicated.

With regard to the reduplication of the papyrus capital on our handles I merely wish to call attention to double-axes with reduplication of edges, cf. EVANS, *Palace of Minos,* IV, p. 342 ff., which resemble most strikingly the attachment of the handles. Obviously, in both instances the underlying artistic idea is the same, and a fragmentary handle of a silver vase from the Royal Tomb at Isopata in reality constitutes an intermediate, transitional form. "Its exterior attachment below terminates in an outline recalling that of the reduplicated edges of many of the double axes of Minoan cult", cf. EVANS, *The prehistoric Tombs of Knossos,* in *Archaeologia* LIX, p. 545, fig. 140 (Fig. 118: 6). It is the question of a ring-handle, and it has certainly not belonged to a 'cup with pedestal', as EVANS holds, but to a cup of the same type as our two gold cups from Dendra.

Upon the knowledge of his time regarding the relations of the ancient civilizations in the East Mediterranean region, W. MAX MÜLLER, *Asien und Europa nach altägyptischen Denkmälern,* Leipzig 1893, emphasizes, p. 306 ff., that "die Fabriken der Phöniker" produced metal objects in their own style that were in great demand in Egypt. He adds the following: "Der merkwürdige Stil dieser Metallarbeiten fand, obwohl eine Entartung des ägyptischen Stiles, in Ägypten viele Nachahmung, so dass sich durch wechselseitige Einwirkungen ein beiden Ländern gemeinsamer pseudoägyptischer Kunsttypus ausbildete. (Die Stilisierung des Lotusornaments ist hier fortgeschritten aber die linearen Ornamente sind sehr wenige.) Am charakteristischsten ist die übermässige Häufung von Tierfiguren und Tierköpfen". We have now learned that just these features are characteristic of the Minoan-Mycenaean art, and many of the products that MÜLLER refers to "Fabriken der Phöniker" certainly originated in the region of the Aegean civilization. However, one may still speak of a "Syro-Egyptian fabric" with a certain justification, one of its characteristics being handles ending in papyrus tufts, cf. illustrations in MÜLLER, *o.c.*, p. 308, even if it cannot have exercised any influence on the Minoan-Mycenaean art for chronological reasons alone — in reality the opposite occurred, cf. HALL, *The Civilization of Greece in the Bronze Age*, p. 229.

Is it merely accidental that the only two representations of an Egyptian double papyrus capital hitherto known from Greece occur on gold cups from Dendra-Midea? That there is a certain connection between them, is evident. Are both of them imported from the same source? Are both products of local manufacture? Or is the one imported, the other a local imitation?

In the strongly conventionalized pattern within the decorated zone on our gold cup the sacral ivy appears, forming a continous pattern, a chain, in which the recurved outline of the leaf is combined with the S-scroll. The motif is to be found, even if in a somewhat schematic form, on a sherd found in Knossos, cf. EVANS, *Palace of Minos*, II, p. 492, fig. 297 *a*, and it does not seem at all impossible to me that the pattern itself was first evolved in Crete and was taken over from there in its completed form by Mycenaean art. It is certain, however, that here, especially in Dendra-Midea, it attained a popularity unequalled in any other place. What is especially significant in this connection, is that we have an exact counterpart of our gold cup in a silver cup from chamber tomb No. 2. at Dendra, unfortunately somewhat fragmentary, cf. *Royal Tombs*, p. 99 f., pl. XXXIII in the lower left corner.

In reality the two cups are so very similar that even their dimensions correspond. The profile is the same, the pattern of the decorated zone is identical and bordered on both sides by cross-ribbed bands, the handles have round toruses at the edges in both instances and a raised ridge in the middle, round the rim of both vessels is a cross-ribbed torus. The different metals employed, in the one instance gold, in the other silver, account for the only dissimilarity, the more flexible gold-plate having made it easier to model the rim in octofoil form, whereas the rim of the silver cup is perfectly circular — the shape of the lower attachment of the handle of the silver cup, is unknown to us. We are again confronted with the same problems as those raised in connection with the handles. In this instance the relationship is still more evident — we may simply speak of a copy in another material. Are both of them imported from the same place? Are both products of local manufacture? Or is the one imported, the other a local imitation?

As regards the decortive pattern, we find it once again on a find from Dendra-Midea, on the rim of a spreading bronze bowl with spout from the same tomb as the silver cup just mentioned, cf. *Royal Tombs*, p. 92 and fig. 67, here engraved, not executed in *repoussé* as on the two cups of precious metals.

We have thus established that one and the same decorative pattern, of which no counterpart exists in any other place, occurs at Dendra-Midea on three objects, on a gold cup, on a silver cup, otherwise identical with the gold one, and on a bronze vase.

The sacral ivy-leaf, in strongly conventionalized form, occurs as a decorative motif on the bowl of the silver spoon from chamber tomb No. 10, cf. above p. 90. The same motif, more carefully executed, is to be found on a bronze ring round the shoulder of a jug — it also recurs on the handle — from chamber tomb No. 2 at Dendra, cf. *Royal Tombs*, p. 92, No. 2, pl. XXXII, top right. The same pattern, carved in wood, is also preserved on the handle of a mirror from the same tomb, cf. *Royal Tombs*, p. 97, No. 21, pl. XXXIII, top right. The occurence of this motive in Crete has been referred to above p. 90, cf. also

EVANS, *Palace of Minos*, especially II, p. 478 ff. In addition it is often met with as a motive of ceramic art in Dendra, but still more eloquent testimony of its local popularity is the variety of materials in which we have found it rendered: in silver, bronze and wood. To connect objects adorned with this ornament directly with a cult, as EVANS is inclined to do, does not seem justified in view of the finds from Dendra-Midea.

The two related patterns from Dendra-Midea, executed in different materials, evidently enjoyed a local popularity — one might even feel tempted to speak of a 'Midean style' — and this seems to me to afford a certain guidance in attempting to answer the question whether we are here concerned with importation or, at least to some extent, with products of local manufacture. Before giving a definite answer however it is advisable to survey briefly the conditions revealed by the excavations with regard to the Minoan-Mycenaean handicrafts and their material pre-requisites.

That the direct interchange of products of the industrial arts, as well as of other commodities, was very extensive and important in prehistoric times, is evident already from those representations in Egyptian tombs which show that manufactured art products were included among the "tributes" presented to the Pharaoh by foreign peoples. We must be careful, however, not to ascribe to the word "tribute" too much of its usual meaning. The conventional character of the Egyptian texts do not allow any conclusion to be drawn concerning a subjugation of the countries in the area of Aegean civilization. The Egyptian word that is met with in such a connection usually translated 'tribute' is, as a rule, a word that signifies 'that which is brought' i.e. any sort of income of an incidental character, according to information given me by Dr. SÄVE-SÖDERBERGH. We have to remember that the period of civilization, with which we deal, is a premonetary one when all trade was simply barter. A glance, for example, at the raw materials imported by the Aegean area, is wholly sufficient to explain the export of manufactured products illustrated in the Egyptian representations.

In the first place, attention may be called to the innumerable finds of ivory objects, worked in indigenous style, from Early Minoan throughout the whole Bronze Age, the manufacture of which has as an indispensable pre-requisite the importation of ivory, no doubt mainly from Egypt, as the ivory seals from the vaulted tombs at Mesará show. The majority of these are mostly unfinished imported Egyptian objects, but of local finished workmanship, many having adopted designs found in Egypt, e.g. crocodiles and apes, cf. HALL, *The Civilization of Greece in the Bronze Age*, p. 69 f. In addition, in a deposit at Phaestos, belonging to the close of the Neolithic or to the very beginning of the Early Minoan Age, a fragment of the base of an elephant's tusk has been found, testifying to the importation of the raw material, cf. EVANS, *Palace of Minos*, II, p. 742, and in the shaft-graves Nos. II, IV, and V at Mycenae useless waste of the precious material has actually been discovered, cf. KARO, *Schachtgräber*, p. 319. A glance at the word 'ivory' in the index of almost any excavation account gives us an idea of the great proportions this importation actually assumed during the Greek Bronze Age. A closer examination is required of the ivory objects found in the Aegean region — it would most probably show that many of the so-called ivory objects found in the area are made not of elephant tusks, but of hippopotamus teeth as in Egypt, cf. KEES, *Ägypten*, p. 8, note 2. The term "ivory" is often used in this wider sense with regard to Egyptian objects.

Other objects whose importation from Africa is equally certain are ostrich-eggshells that were used as luxury vessels, probably as rhyta for cult purposes. Because of their fragile nature they have of course not come down to us in any great number, but we possess examples from shaftgraves IV and V at Mycenae, cf. KARO, *Schachtgräber*, p. 238, pl. CXLIII, and from the bee-hive tomb at Dendra-Midea, cf. *Royal Tombs*, pp. 14, 37, 54, pl. III. Fragments have also been found in other tombs at Mycenae, cf. National Museum at Athens, No. 2667. In Crete, on the other hand, remains are known only from Palaikastro, cf. *BSA* X, p. 202. EVANS, *Palace of Minos*, I, p. 594 f. and primarily II, p. 221 ff., has shown incontrovertibly that this type of luxury vessel goes back to the 11th and 12th Dynasties in Egypt, and that it has exercised an influence in the original development of certain Cretan vase types as early as Middle Minoan II — in Egypt, too, it has influenced prehistoric pottery as well as stone vases.

We have, no doubt, also to reckon with the fact that a good deal of the gold met with in the world of Aegean civilization was imported from Egypt in the form of gold dust, the primary source of which must have been Nubia — the expansion of Egypt in that direction during the 12th Dynasty was evidently related to the acquisition of the gold deposits discovered in this region at that time, cf. SÄVE-SÖDERBERGH, *Ägypten und Nubien*, pp. 66 ff., 86 ff. EVANS, *Palace of Minos*, II, p. 756, however, also points to the caravan-routes leading from the African interior to the Libyan coast opposite Crete as possible avenues for the importation of this raw material, but the direct suggestions afforded by the ivory importation and the political conditions of Egypt and the Sudan as a whole justify us in assuming that at least in the New Kingdom the import *via* Egypt was the only one, cf. SÄVE-SÖDERBERGH, *ib.*, p. 222, note 1.

Yet another raw material that would be of very great importance in the manufacture of gems and seal stones in the Mycenaean Age, comprised semi-precious stones of all kinds, and these were no doubt imported to a considerable degree from Egypt. Semi-precious stones — precious according to the values of that age — played a very great rôle, and the changes of fashion influenced the use of the different kinds of stones as ornaments: in the time of the Middle Kingdom amethyst and garnet were particularly fashionable, while jasper was most highly appreciated in the 14th and 13th centuries, cf. KEES, *Ägypten*, p. 126. Most of the semiprecious stones, such as onyx, carnelian, agate, amethyst, jasper, rock crystal, etc. are to be found in small quantities in the wild ridges of the Arabian desert, and they were imported into Egypt and there worked into ornaments as early as the period of the so-called Badari civilization, the oldest known period of the Bronze Age in Egypt. From the wealth of material available regarding the communications between Egypt and the world of Aegean civilization, it is certainly not erroneous to assume that these raw materials were also mainly imported *via* Egypt; some amethyst beads that were probably produced in Egypt, cf. above p. 49, also give us a reliable hint in this direction.

Another material that was certainly imported is amber, which seems to have been a much appreciated material particularly during Late Helladic I for ornamental objects on the Greek Mainland — not in Crete on the other hand, cf. NILSSON, *Minoan-Mycenaean Religion*, p. 17 ff. Amber came from Jutland and the coast of the Baltic[1], and it is believed possible to trace the routes of the amber trade to the northernmost coast of the Adriatic sea, from where the raw material was spread over the Mediterranean region, cf. STOLPE, *Sur l'Origine et le Commerce de l'Ambre jaune dans l'Antiquité*, in *Compte rendu du Congrès international d'Anthropologie et d'Archéologie, Stockholm* 1874, p. 777 ff., and DE NAVARRO, *Prehistoric routes between Northern Europe and Italy defined by the Amber Trade*, in *Geographical Journal* 66, 1925, p. 481 ff. That amber disappeared also on the Greek Mainland, may have depended on such changes of fashion as those which obtained and are fully ascertained in Egypt with regard to the semi-precious stones, referred to above, but the main cause of its disappearance seems to me to be a reorientation of Mainland trade toward the south in the earlier part of the Late Helladic period.

From what has been said above, it is clearly evident that the importation of certain precious raw materials to the region of the Aegean civilization must have been of considerable proportions. As the characteristic representations that adorn them show, these raw materials were then worked up in the Aegean culture area, and the question arises whether this activity was centralized in one locality or going on in many small workshops scattered over the whole region. At present, very few important places have been so thoroughly investigated that such workshops have been found in connection with the more monumental buildings, but nevertheless we have a sufficient number of examples to be able to answer the question with a fair degree of certainty.

The workshop quarter in the palace of Knossos is so well known that there is no need to enlarge upon it here. In this quarter there existed not only a pottery, but also a faience factory and the work-room of a lapidary, in which blocks of Spartan basalt have been found, partly in a halfworked condition, cf. EVANS, *Palace of Minos*, III, p. 269. Immediately adjoining the palace there also appears to have been a workshop for a specialist in the manufacture of stone lamps, cf. *ib.*, II, p. 298.

In Mycenae SCHLIEMANN found, in a spot not precisely indicated, a couple of casting-moulds for gold and glass ornaments, cf. *Mycenae*, p. 108, figs. 162, 163. In one of the houses on the acropolis in Mycenae, to the left, inside the Lion Gate, TSOUNTAS discovered in 1890 a workshop, in which were found casting-moulds of granite as well as some half-manufactured articles of semi-precious stone, cf. *Ephemeris Archaiologiki* 1897, p. 97 ff., cf. also KARO, in *Arch. Jahrb.* 1911, p. 259 regarding the gem workshop. Ivory carvers also worked in Mycenae as early as the shaft-grave period as has been shown by waste in the graves, cf. above p. 145. It must be inferred that we are here dealing with workshops which in one way or another were connected with the royal castle.

---

[1] Cf. EVANS, *Palace of Minos*, II, p. 167 ff. The Italian amber which occurs essentially in Iron Age contexts can hardly play any rôle in this connection, cf. ZANON, *Le Diatomee dell' Ambra*, in *Studi Etruschi* III, p. 427 ff. and literature there cited. Cf. also *Studi Etruschi* V, p. 49 ff.

However, the most interesting find of this kind on the Mainland has been made by KERAMOPOULOS in Thebes, published in *Ephemeris Archaiologiki* 1930, p. 29 ff. under the title *Αἱ βιομηχανίαι καὶ τὸ ἐμπόριον τοῦ Κάδμου*. Here in connection with the castle he discovered a pottery with a kiln, in addition to a great quantity of semi-manufactured articles of agate, carefully published in the paper just mentioned, as well as traces of a workshop for the casting of glass beads and objects of gold.

I do not doubt at all that similar workshops once existed on the acropolis of Midea; excavation might eventually make it possible to determine their position. There must certainly have existed workshops for gold- and silversmiths, for casters of glass beads and for copper-smiths, as well as for wood carvers. That there were also carvers of gems, one feels tempted to believe in view of the re-cut seal stone from the tomb of the Queen, the palimpsest, cf. above p. 83 ff. It seems impossible to doubt that the strange figure above the boar is the remnant of a lion with the hind legs against the boar's head and the more deeply engraved, cervical part over the hind part of the boar's body. On the basis of my theory of the heraldic animals on the seal stones, cf. *Royal Tombs*, p. 125, further *Dragma* (*Acta Instituti Romani Regni Sueciae*. Series altera I), p. 379 ff., my explanation of the re-cutting of the seal stone would be, that the Queen desired a stone reminiscent of her own heraldic animal, the boar, not of the King's the lion. I call attention to the fact that the Queen in the bee-hive tomb wore a bracelet with a carnelian showing two similar boars back to back, cf. *Royal Tombs*, pp. 38, 58, 129, pl. XIX. With regard to the boar as an heraldic animal the reader may be reminded of the Erymanthian boar in the Herakles legend and of the legend of the Calydonian wild boar hunt to which princes from all parts of Greece gathered in order jointly to combat the prince of Calydon who displayed the boar in his escutcheon — just as princes from the whole of Greece assembled in order to fight against Troy — cf. *Royal Tombs*, p. 132. The lion representation was ground off as well as possible — the stone was worn as a bracelet ornament, and one side must accordingly be perfectly smooth — but the material, an unusually beautiful, light stone, was too precious to be wholly discarded, and, consequently, there resulted this strange representation with the boar below the apparent form of a cloud. Such a re-cutting shows that a certain significance was really ascribed to the representation on the seal stone, its meaning was at least not an indifferent matter in ancient times, it was not a *l'art pour l'art* product, but bore a definite relation to the person who wore the seal stone.

The finds from Dendra-Midea, as we have been able to ascertain, reveal a predilection for certain patterns, employed in different materials, on objects of gold, silver, bronze and carved wood, and this fact, in conjunction with the lessons derived from the excavations in Knossos, Mycenae and Thebes, justify us in concluding that precious raw materials imported from abroad were treated in workshops in different localities within the Aegean culture area. With the finds from Dendra-Midea before our eyes we are justified in assuming that under these circumstances variant local styles developed as in the case of pottery.

As regards the artisans it is of course highly probable that they journeyed from place to place, and that they were to some degree itinerant masters and journeymen, who in this manner transplanted patterns and traditions from one locality to another. It also seems probable that war and invasions brought not only finished products, but also prisoners skilled in handicrafts, f. inst. from Crete to different places on the Greek Mainland. The creations of fresco painting, in particular, testify to the mobility of the artisans, because such paintings are stationary, and it is interesting to observe how close an affinity exists between the frescoes in Mycenae, Tiryns, above all in Thebes, and those in Crete. Even if they reveal dissimilarities, particularly with regard to the subject-matter, the technique is nevertheless everywhere the same as in the original Cretan, cf. RODENWALDT, *Der Fries des Megarons von Mykenai*, p. 53, who even believes that he is able to distinguish one workshop that was active in Mycenae from one active in Tiryns, existing contemporaneously for several centuries.

The above does not imply that luxurious handicraft products could not have been transported considerable distances in barter, or as war booty — this naturally applies, above all, to intrinsic valuables. Among the unambiguously imported articles from Egypt found in Dendra-Midea I include the garment embroidered with beads, of which about 40.000 small beads were found in tomb No. 2, cf. *Royal Tombs*, p. 106, pl. XXXIV V, as well as an alabaster vase from the same tomb, *ib.* p. 101, No. 8, fig. 79, and a similar one from tomb No. 6, cf. above p. 24, fig. 27, both of typical banded Egyptian alabaster and of a shape characteristic of certain Egyptian vases. In the shaft graves at Mycenae there were several precious treasures, of unmistakable Egyptian origin, even if I, for my part, am inclined to credit the indigenous workshops with more than KARO does, *Schachtgräber*, p. 308 ff., and, especially, KURT MÜLLER, cf. *Arch. Jahrb.* 1915, p. 314 ff. The native artists of the Greek Mainland in the generations immediately following the period of the shaft graves — it is to this period that our finds from Dendra-Midea belong — must be credited in particular with a very highly developed artistic skill, manifest at the very time when castle architecture and pottery give evidence of a tremendous advance in other spheres of cultural activity.

After this digression from our specific theme we return to the question whether our finds from Dendra-Midea are to be regarded as imported or as products of native handicrafts. I continue to be of the opinion that the gold cup with the octopus representation from the bee-hive tomb, characterized as it is by a union of naturalism in detail with conventionalization of the whole, is a work of a Cretan master, cf. *Royal Tombs*, p. 45. On the other hand, as regards the silver cup with the flying birds from Chamber Tomb No. 10, on which many details of the former recur in severer form, I am inclined to consider it as a work of the Greek Mainland. The same applies to the new gold cup from tomb No. 10 with its more ornamental decoration, which, as regards the form of the handle, reveals a certain influence from the octopus cup, and thus also the pendant cup of silver from tomb No. 2. That necklaces of gold and glass beads were made in local workshops is indicated by the above-mentioned casting moulds, and a further indication of this is revealed by our gold necklace from tomb No. 10, p. 78 f., No. 22, which shows so close an affinity with the necklace found by BLEGEN in the near-by Argive Heraeum.

Further enlightenment with regard to the conditions here dealt with is also forthcoming from the sword found in the bee-hive tomb, cf. *Royal Tombs*, p. 35, No. 12, pl. XXII III. Its hilt has been adorned with convex ivory plates which were plated with small gold bars, about 5.000 in number. Exactly the same technique and precisely the same spiral ornamentation that adorns the surface rendered even by means of inlay, occur on a sword from Mycenae, and TSOUNTAS has emphasized in *Ephemeris Archaiologiki* 1897, p. 121 f., cf. pl. 7, that we have to deal here with a native technique, unknown from other quarters, possibly, however, existing in embryo in Egypt, where it could be reasonably explained as dependent on influence from the Mycenaean sphere. In the vicinity of the deposit of the "Sword tablets" in the south-west corner of the Domestic Quarter EVANS, cf. *Palace of Minos*, IV, p. 854, found some fragmentary remains of weapons of state, i.a. "pieces of gold plate with minute gold nails, such as are otherwise associated with wooden handles of swords", and a part of a crystal hilt-plate, which had formed part of the attachment to a sword of the cruciform type. Such a sword was found together with the sword studded with gold nails in the Royal Tomb in Dendra-Midea, cf. *Royal Tombs*, Pl. XXII. However, the connection in which the gold nails were found in Crete stamps this find as decidedly younger than the shaftgraves, and there is nothing to suggest that the technique is to be considered as Cretan in origin. Whether the Dendra sword originated in the workshop at Mycenae or was the product of a Midean goldsmith who only learned the technique there, must of course remain an open question.

It is not permissible to draw the limits too narrowly concerning the local manufacture of such exceptional valuables as those dealt with here. Such workshops could only have flourished in connection with important royal castles or palaces. The princes were the only people who could supply the precious raw materials, and we are no doubt justified in regarding the workshops as royal factories. Above all, as regards Argolis, where the castles in the Mycenaean age were situated at one or two hours travelling-distance from one another, it must be remembered that the princelings must have had the closest contact with the sovereign prince in Mycenae and with each other and that they were often no doubt related. Taking into consideration my theory of the heraldic animal of the Mycenaean prince we have to reckon with a member of the Mycenaean royal house as ruler in Midea — the Midea prince too has the lion in his seal, cf. *Royal Tombs*, p. 129. It is also apparent that they exchanged gifts in the manner known to have been customary in Egypt during this period according to the tombal representations of the rendering of "tribute" and the El-Amarna letters concerning for example exchange of gifts with the Hittite kings.

What has been said above about workshops for "finishing" the more precious raw materials is of course valid in a still higher degree with regard to the less precious stuffs. Bronze-casters and bronze-smiths no doubt existed at every princely court, and that they enjoyed great esteem is evident from the fact alone that the Homeric gods have Hephaistos, the god skilled in forging, in their midst. Indeed, even places that were not of the first importance, as Asine, had bronze-casters — to judge from casting-moulds, cf. *Asine*, p. 250.

Finally, as regards the manufacture of the vases found in Dendra-Midea, it is not possible to arrive at any conclusion as long as the actual kiln remains unknown, but overfired pieces of pottery, of which considerable quantities has been found inside the circuit wall on the acropolis of Midea, indicate local manufacture. However, as far as I know, there is no local supply of suitable potter's clay, and this raw material must therefore have been transported here, by no means impossible in view of the fact that the clay wrought at Kerameikos in classical times was brought from Cape Koliás. It is most natural in the case of Midea to think of the excellent clay pits on the little Berbati plain, situated about an hour's journey from Midea. However, it seems probable to me that most of the pottery came from the Mycenaean potteries in Berbati, particularly in view of the fact that identical vases to the examples from Midea are sometimes found there and also in the Argive Heraeum. During our earlier excavations we discovered the existence of a considerable Mycenaean pottery with a kiln at Berbati [1], and suitable clay is to be found in the immediate vicinity. The excavations at Berbati, which are not yet concluded, remain unpublished, but I wish to mention that fragments of Palace Style vases, among other things, have been found close by the kiln among over-fired pottery and masses of sherds and that some of the most magnificent representatives of this group of vases were found there in the bee-hive tomb investigated by us. One of these vases is a pendant of the Palace Style vase with spiral ornamentation from our chamber tomb No. 10 at Dendra, cf. above p. 64 ff., and I do not hesitate to characterize it as a product of the neighbouring Berbati. In connection with the publication of the excavations in Berbati I shall return to the question of the Mycenaean pottery production.

---

[1] Cf AKERSTROM, *Das mykenische Topferviertel in Berbati in der Argolis*, in *Bericht uber den VI internationalen Kongress fur Archaologie Berlin 1939*, p 296 ff.

IV. General remarks.

THE chamber tombs investigated belong to one of the richest necropoles hitherto known, and they have, at least in part, an obvious, direct connection with the settlement on the fortress hill of Midea. This is shown both by the rich finds and by the bee-hive tomb, a royal sepulchre, situated in their immediate vicinity. It is also apparent that at Midea as at Mycenae other necropoles than that found close to Dendra are to be reckoned with and one of these has actually been discovered two kilometers southeast of the citadel rock in an olive plantation close by a ravine. There the roof of a chamber had collapsed a couple of years ago, and, according to the peasants, pottery sherds and several *κουκλίζαι*, that is figurines or so-called idols, were found, an indication that the sepulchre in question is a Late Helladic III tomb. The site deserves a closer examination, which, however, we have not yet had an opportunity to make. Like WACE I accept TSOUNTAS' assumption that the geographic distribution of the chamber tombs in definite groups is wholly intentional, in as much as the inhabitants of the various villages outside the castle, the suburbs of Midea, who lived in an organization of clans or family groups, have maintained their clanship even after death [1].

It is worthy of note that our necropolis is situated west of Midea, as in the case of so many other Mycenaean necropoles in relation to the settlements, f. inst. in Mycenae, Argos, Argive Heraeum, Zygouries, and Asine (northwest). This may be dependent upon geographical and geological conditions, but the inference cannot be wholly dismissed that the localization was influenced by an idea that the realm of the dead or its entrance was situated in the west. The Egyptians traditionally localized it in this quarter, cf. KEES, *Totenglauben* p. 88 ff. I have referred, *Asine*, p. 423, to the fact that the older necropoles adjacent to Greek cities are situated in the west or the northwest — so in Athens, Eleusis, Corinth, Sparta, Asine, in the island of Thera, at Vrouliá in Rhodes. I have associated this localization with an orientation of the dead that first becomes manifest in the Proto-Geometric graves with the head to the east, the legs to the west for the journey to Hades. That the cemeteries were localized west of the settlements I ascribe to the desire of the living not to be troubled by the spirits of the dead, when they journeyed to Hades or, subsequently, if they returned from there. Formerly I was of the opinion that the cemeteries began to be localized west of the settlements only as late as the Proto-geometric Period, but the above evidence might indicate that, as regards Greece, the idea of Hades being in the west goes back to the beginning of Late Helladic, i.e. to the inception of burial in chamber tombs, and that it is possibly connected with the new attitude to the dead which is manifest from that time in the prevalence of the new form of burial. It cannot go back to Middle Helladic with its frequent intramural burials. A careful investigation of this problem is eminently desirable.

---

[1] Cf. TSOUNTAS-MANATT, *The Mycenaean Age*, p. 132; WACE, *Chamber Tombs at Mycenae*, p. 121 f.

The necropolis we have discovered immediately west of Dendra does not therefore belong to any of the smaller settlements outside the circuit wall; this applies at least to the older tombs from Late Helladic I and II. The smaller tombs Nos. 1, 3, 7, and 11, that were constructed only during Late Helladic III, might possibly be explained in that the older family tombs, which contain the remains of relatively few interments, could no longer be used for new burials because of collapses or other circumstances and that the now impoverished families had to be content with less pretentious tombs constructed near the abandoned ones. If we take for granted that the bee-hive tombs are royal sepulchres — in this we are justified — we must either assume that the princes of Mycenae did not belong to the same family — which seems most improbable — or else we are justified in stating that an important personage provided himself and his immediate family with a tomb that was closed for ever after his own death on the same principle that is met with in Egypt. If, as seems probable, only the richer families could afford to have chamber tombs during Late Helladic I and II, then WACE is justified in considering the great number of Late Helladic III chamber tombs with their less precious burial gifts as evidence of the increase in general prosperity, cf. *Chamber Tombs*, p. 123 ff.: "a general increase in prosperity might have enabled more families to provide themselves with sepulchres" — the chamber tomb is being popularized. Many interments in one and the same tomb most probably indicate that the owners belonged to a poor family, none of whose members could assert his independence in providing himself and his immediate family with a tomb of their own.

The orientation of the tombs in relation to the rocky slope in the Dendra necropolis has already been referred to, cf. above p. 17. As regards the shape of the dromos, WACE has established two different types, cf. *Chamber Tombs*, p. 124; this differentiation, however, has been somewhat modified by BLEGEN, *Prosymna*, p. 233, though it may be said to have been confirmed by the discoveries in Dendra. The older type of tomb with relatively short and broad dromos sloping inwards, the sides having only a slight inward inclination and whose opening is comparatively broad at the top, is represented in Dendra by tombs Nos. 6 and 8 in its older execution. Tomb No. 8, which in its later form has a longer dromos and consequently assumes a relatively narrower and more horizontal form, demonstrates most clearly that WACE's observations are correct. When BLEGEN wishes to see in a relatively slight downward slope of the dromos another criterion of high age, the material from Dendra speaks against him; the material from the Argive Heraeum as well is not univocal, cf. *Prosymna*, p. 233, note 1.

In tomb No. 6 we find confirmation of WACE's observation that tombs of the older type frequently have two or three steps in the dromos in order to reach down quickly to a depth sufficient for securing the necessary supporting capacity for the rock roof. However, with a view to the experience gained in the Mycenaean necropolis at Asine, cf. *Asine*, p. 356 f., caution must be taken against dating a tomb only on the basis of the length of the dromos and the possible occurrence of steps, features which may depend solely on the nature of the slope, cf. also BLEGEN, *Prosymna*, p. 234. Tomb No. 6 has exactly the same arrangement at the inner end of the dromos as tomb 515 at Mycenae; two steps immediately in front of the stomion which also results in a kind of bench arrangement along the side walls of the dromos. Our tomb No. 6 differs, however, from the Mycenae tomb in that the walls of the dromos run straight from end to end, no anti-chamber being formed as in in the latter.

Our two Late Helladic I tombs, Nos. 6 and 8 in its older form, have stomions that are more broad than deep, which seems to confirm WACE's statement, *Chamber Tombs*, p. 126, that "the lack of depth in a door-way is a fairly sure mark of early date". In the younger tombs at Dendra the reverse condition usually obtains, but in one tomb, namely No. 1, which has two steps at the outer end of the dromos, and in which only finds from Late Helladic III were made, the stomion is wholly lacking. This urges a certain caution in applying WACE's criterion of age — cf. also WACE's tomb 528 and what he says regarding it, *Chamber Tombs*, p. 126, as well as observations from Asine, cf. *Asine*, p. 357.

To judge from the tombs in the Dendra necropolis we must assume that it was customary to close the outer end of the dromos by means of a low stone wall; this was found in tombs Nos. 7, 9, and 10, and also the extensive stone filling at the dromos' outer end in tomb No. 8 probably has something to do with this custom. The stone wall in tomb No. 10 was still quite intact, while the walls at the surface level in the other tombs have been partly damaged by cultivation. I must also call attention to a similar blocking wall which was discovered at the outer end of the bee-hive tomb, cf. *Royal Tombs*, p. 19.

At the inner end of the dromos, in front of the stomion, but over the whole width of the dromos, a blocking wall occured in tombs Nos. 6, 9, and 10; in tomb No. 6 it survived only to a height of three or four layers of stone. In tombs Nos. 9 and 10 the oldest blocking wall rests immediately on the bottom, overlaid by a layer of earth from a later opening of the tomb, after which the trouble was taken to erect a new and similar wall across the whole width of the dromos. A similar blocking wall in front of the door-way was found in the bee-hive tomb, cf. *Royal Tombs*, p. 11, fig. 8, and could also be determined in Asine, cf. *Asine*, p. 357.

No sherds younger than Late Helladic III were ever found in the earth filling of the dromos though a quantity of Early Helladic sherds occurred, coming from earlier settlement levels on the site now occupied by the necropolis. That the dromos was completely filled up after each successive burial is beyond doubt, cf. *Royal Tombs*, p. 26, *Asine*, p. 357, WACE, *Chamber Tombs*, p. 127, BLEGEN, *Prosymna*, p. 236.

Tombs Nos. 7, 8, 9, and 10 clearly indicate that the dromos section immediately adjoining the stomion was filled with stones, in part forming a regularly built-up wall. An additional observation, especially as regards tombs Nos. 9 and 10, is that the inner end of the stomion has been paved after a secondary opening of the tomb, the pavement having extended as far out into the dromos as the earth filling was removed for the new burial. This pavement is not to be mistaken for the masses of stones that were heaped practically throughout the whole dromos, especially directly in front of the door, after a secondary opening of the tomb, and that merely served as filling material.

The stomion is situated more or less exactly in the middle of the entrance wall of the chamber, indicating, as WACE rightly remarks, "that the tombs were dug out according to definite plans", cf. *Chamber Tombs*, p. 131. In conformity with the general practice the door-way is broader at the bottom than at the top, and in two instances, tombs Nos. 9 and 11, the width increases inwards, in the direction of the chamber. In some of the tombs the lintel has been damaged, when the door filling was removed at secondary burial, and has often been deformed by percolating water though, originally, it appears to have been horizontal in most of the tombs. An exception occurs in tomb No. 10 where it seems to have been curved, as in certain tombs at Mycenae, cf. WACE, *Chamber Tombs*, p. 132, and in the Argive Heraeum, cf. BLEGEN, *Prosymna*, p. 239. As a rule, the floor of the stomion was level with the floor of the chamber, in tomb No. 8, however, the stomion floor, like the lower end of the dromos was on a slightly higher level than the floor of the chamber; in tomb No. 7 the door-way descended by a small step in the outer part of the stomion into the chamber.

Three of the tombs, Nos. 6, 8, and 9, possess two deep grooves which begin some distance out in the dromos, pass through the doorway and continue for some distance into the chamber. Similar grooves exist in several older tombs at Thebes and in the Argive Heraeum. In tombs Nos. 15 and 26 at Kolonaki, immediately east of Thebes, of which the latter at least dates from the beginning of the Mycenaean age, KERAMOPOULOS discovered analogous grooves, cf. *Archaiologikon Deltion* 1917, p. 159 and 194. In tomb No. 15 he indicates the depth as 10 cm.; they begin in the dromos at a distance of 45 cm. from the door and extend into the chamber for a distance of 1.20 m. In tomb No. 26 the traces extend about 32 cm. to either side of the stomion. KERAMOPOULOS expresses the view that they were made in connection with the burial rites in order to protect the parastades from contact and abrasion by the wheels of a hearse of the type known from the Dipylon vases.

BLEGEN found two similar narrow, shallow grooves in the stomion of tomb No. 2 in the Argive Heraeum, whose older deposits were unmistakably of Second Late Helladic date, and concerning which he says, *Prosymna*, p. 175: "The purpose of these two grooves, which were not paralleled in any of the other tombs, except number 44, did not become apparent." In tomb No. 44 from Late Helladic I the grooves have a width of 30 to 34 cm. and are 16 cm. deep at the deepest place, slowly rising outwards in the dromos and inwards in the chamber, *Prosymna*, p. 207. He says: "I do not understand the purpose of these grooves." I would see a connection between this arrangement of two more or less parallel, narrow cavities and the broader cavity in the middle of the door which has been discovered in tomb No. 37 in the Argive Heraeum. BLEGEN says of this, *Prosymna*, p. 123 f., that it is a question of a shallow groove which begins at a distance of about 2 ½ m. from the inner end of the dromos and extends through the stomion and for some distance into the chamber itself. It is somewhat more than ½ m. broad at the outer end and then widens to nearly 90 cm. inside the chamber, where it slowly rises to the level of the chamber floor. Its greatest depth is 0.30 m. outside the door. "The purpose of this broad groove was not clear to me."

Cavities of the kind in question are thus a feature especially to be found in tombs from Late Helladic I—II. That they were made in order to protect the parastades against damage, seems to me quite correct. However, it can hardly be a question of a hearse of the type that is seen in representations from the Geometric Period. The dromos of tomb No. 6 has steps at its inner end, and this fact excludes the use of a hearse; then a sledge would be more appropriate — we shall return below p. 160 to the rôle of the sledge at burials, an important one, it may be noted, in Egypt. However, the fact that the grooves are sometimes not parallel but diverge, cf. e.g. BLEGEN, *Prosymna*, Plan 47, argues against even this supposition.

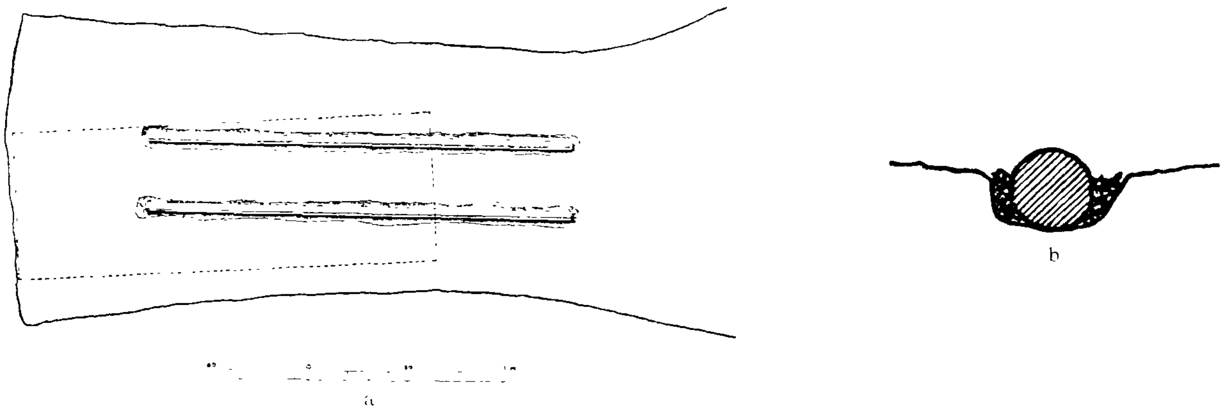


Fig. 119 a) Chamber of the Tomb of Senebtisi Grooves with skid poles, the dotted outline marks the position of the coffin

b) Section showing the grooves with the skid poles and the packing around them (After MACE-WINLOCK, *The Tomb of Senebtisi at Lisht*, p 14, Figs. 5—6)

Now I think the explanation is very simple. Exactly the same arrangement occurs in Egyptian tombs, and there can be no doubt as to the purpose of the grooves there. MACE-WINLOCK, *The Tomb of Senebtisi at Lisht*, p. 14, describe one detail in the arrangement in the chamber of this tomb in the following manner: "When the rubbish was cleared away from the entrance to the chamber, two skid poles, on which the coffin had been slid into position, were brought to light. These were laid in grooves cut in the floor, and were packed tight with chips of the rock in which the tomb had been excavated" (Fig. 119). The poles, still preserved, were of cedar and were artificially rounded. In the grooves of the Mycenaean tombs no remains of wood have been found, either because the poles have decayed entirely or because they were removed after use — the last alternative seems to me the most probable.

In Egypt the coffin had been slid into position on the poles; what can have been the purpose of this arrangement in the Mycenaean tombs? Certainly something heavy has been brought into the tomb, slid on poles, and the difficulty was to get it through the narrow doorway. I think that we must reckon with a complete parallelism with Egypt. Consequently, I find in the presence of these grooves another support of my theory about coffin burials in the Mycenaean tombs (cf. above p. 120) and also a proof of direct relations between Mycenae and Egypt during the initial phase of the Mycenaean Period, cf. below p. 176 ff.

In this connection it may be recalled that two grooves of exactly the same nature occur in the stomion of the lateral chamber of tomb No. 8.

The original stone packing in the stomion remained to a certain height in all of the tombs now excavated except tomb No. 10, which, apparently, had never had any such filling. In the stone packing of tombs Nos. 9 and 11 at least two periods could be clearly distinguished, indicating different stages in the use of the tomb.

The finds that were made in the stomion are probably almost without exception from the scraping of the chamber in connection with its secondary use and occurred as a rule in the layer of earth on the top of the remains of the original door packing.

As regards the form of the chamber, it is rectangular throughout all the tombs now excavated, the depth, or height being greater than the width with one exception, namely the relatively late tomb No. 11, whose width is greater than its depth, the harder rock having made it impossible to retain the normal rectangular type.

Among the chamber tombs here published there are two, Nos. 6 and 8, that deviate from the normal type in that they possess two chambers. There already existed a number of examples of similar chamber tombs whose ground plan deviates from the normal type. When excavating in the chamber tomb necropolis at Mycenae, cf. *Ephemeris Archaiologiki* 1888, p. 129 ff., TSOUNTAS found among 52 tombs 4 that have side chambers, placed in different ways. In two instances the side chamber lies to the right, in one to the left, and in one directly facing the entrance, cf. *ib.*, pp.137, 145, 150, 152. It is difficult to date these tombs, since the pottery has not been published, but to judge from their rich contents of ivory objects, bronzes, etc., they ought to be dated relatively high up in Late Helladic. WACE has later found yet another tomb in the Chalkani necropolis at Mycenae, No. 518, that has a smaller chamber behind the rear wall directly facing the entrance, cf. *Chamber Tombs*, p. 75 f. The tomb in question, as its contents show, must have come into use during Late Helladic I; the pottery in the long shaft of tomb No. 6 at Dendra yields as indicated above p. 30, exact parallels with finds from this tomb.

In the Argive Heraeum BLEGEN has found five tombs with side chambers: tombs Nos. 3, 36 and 33 with the side chamber to the left, tomb No. 36 with the side chamber to the right, and tomb No. 25 that has no less than three, opening in each of the chamber's inner walls, cf. *Prosymna*, p. 242. The side chamber of two of these tombs was no doubt constructed during Late Helladic I, in one instance the whole tomb, according to BLEGEN, seems to belong to Late Helladic II. In the two other instances more exact dating is impossible, since they contained no finds. BLEGEN summarizes in a cautious manner: "Accordingly, so far as this evidence goes, the presence of a side chamber cannot be regarded as giving any definite chronological clue to the period of the construction of the tomb."

A classification of the material hitherto known gives the following result:

	Mycenae	Arg. Heraeum	Dendra
L H I	1	2	2
L H II	—	1	—
L H III	—	—	—
Indeterminable	4	2	—

We thus conclude that there is not a single tomb of this type that can be dated with certainty lower than Late Helladic II, whereas five were definitely constructed during Late Helladic I, and certain finds also indicate that the four tombs excavated by TSOUNTAS in Mycenae belong to the beginning of the Mycenaean Age. Under such circumstances it seems to me quite justifiable to conclude that tombs with side chambers are characteristic of Late Helladic I and that the type, in occasional instances, still survived during Late Helladic II.

Attention may be called to the fact that similar side chambers are met with in two of the largest bee-hive tombs known, the so-called Treasury of Atreus in Mycenae and the large bee-hive tomb in Orchomenos.

The two most recently discovered tombs at Dendra, No. 6, and No. 8 in its initial form, seem to me to argue strongly for ascribing a high date to these abnormal chamber tombs, a date that the finds made in these tombs already justify. Tomb No. 6, in particular, shows unmistakable characteristics of high age in its architecture; tomb No. 8, too, has the same characteristics, not quite so apparent, however, because the tomb has been re-hewn at a later date. Such characteristics are a short, broad and open dromos, sloping steeply inwards, with steps and bench-like arrangement at the inner end, and a stomion of greater width than depth, and to these must be added the grooves in the door-way. These criteria of high age exclude the arrangement with two or more chambers from being considered as a secondary development of the normal chamber tomb type, a process that would otherwise have seemed natural. Instead it appears as if a more highly developed tomb type characterized the initial stage, to be later simplified and in a certain measure rationalized in Greece. The material here classified definitely speaks against the opinion expressed by WACE, *Chamber Tombs*, p. 125, that the chamber tomb may have "developed from rock shelters of the type known in Early Helladic times." This material seems to shed new light on the problem of the origin of the Mycenaean chamber tombs, to which we shall return below p. 164 ff.

As regards the roof construction in the chambers, the use of a saddle roof, which is characteristic of tomb I: 2 in Asine, cf. *Asine*, p. 163, 358, and of tomb No. 2 in Dendra, cf. *Royal Tombs*, p. 75, could again be clearly determined here in the outer chamber of tomb No. 6, in both chambers of tomb No. 8 and in tomb No. 9. With reference to the side chamber in tomb No. 6 its roof is slightly vaulted like a barrel vault and the same appears to have been the case as regards the roofs in tombs Nos. 7 and 11; in tomb No. 10 the whole roof had fallen in. The roof construction in tomb No. 9 is particularly interesting, for the eaves are there clearly rendered in negative; in addition the body of the roof seems to be of a form intermediate between saddle roof and vaulted roof, a well defined ridge being present, but with both slopes of the roof slightly vaulted.

This peculiar roof construction in tomb No. 9 has caused me to doubt whether we may really consider the tomb chamber as an imitation of the Mycenaean house, as I formerly thought, cf. *Bulletin Soc. R. des Lettres de Lund* 1924—25, p. 85, *Asine*, p. 358. It is not altogether impossible in view of other circumstances as well, that the prototype of the tombal chamber was a coffin with pointed or slightly vaulted lid of the kind familiar to us through Cretan larnakes and Egyptian coffins. In Egypt the oldest rock tombs in the period of the Old Kingdom have a form that is obviously an imitation of the mastaba tombs, and the sarcophagus is imitated in the same manner in tombs from the 11th and 12th Dynasties. I may here confine myself to referring to ROBERT MOND'S *Report of work in the Necropolis of Thebes during the winter of 1903—04*, in *Annales du service des Antiquités de l'Egypte* VI (1905), p. 77 ff., especially fig. 15, that bears but one interpretation.

In tomb No. 9, as already described, a niche was discovered in the left longitudinal wall, that must be considered from all appearances as a sacrificial niche with a slaughter-table hewn from the rock.

In tomb No. 8, the second period of construction, a rock-cut bench extends along one side of the chamber, apparently left when the rest of the chamber-floor was lowered. Such benches are not unknown, cf. WACE, *Chamber Tombs*, p. 136, BLEGEN, *Prosymna* p. 245. In the same chamber a bench built of stones was also found, obviously belonging to the last period in which the tomb was used; similar benches were also found in tomb I: 1 at Asine; cf. *Asine*, p. 358.

In all the tombs here published except tomb No. 8 shafts or pits were cut in the floor of the chamber. These were obviously intended for various purposes. In tomb No. 6, constructed during Late Helladic I, there were two bone shafts, and one of these, whose original covering remained, was especially instructive regarding the use and closing of such shafts. In tomb No. 7 five shafts were found, of which shaft 1 was doubtless intended for burial, shafts 2—4 served as bone shafts, while shaft 5 was wholly reserved for burial gifts — in this shaft we found a hoard of bronzes *in situ*. In tomb No. 9 there were no less than six shafts, of which 1 and 2 are regular coffins sunk to a great depth and with special countersunk ledges for the support of cover slabs. To judge from its shape and depth shaft 3 was intended for the burial of a child. Shafts 5 and 6 are common bone shafts, while shaft 4 is probably to be associated with the slaughter-table in the niche and served a special purpose as a blood-pit. In tomb No. 10 shaft 1 was for burial, while shaft 2 was wholly reserved for burial gifts. As regards tomb No. 11, both the shallow shafts were undoubtedly bone shafts.

In view of the fact that the shafts had thus a different purpose from the outset, I consider it as erroneous to draw any conclusion regarding the age of the tomb on the basis alone of the occurrence of shafts. The custom of removing the remains of an earlier burial into a shaft in order to make space for the newly-dead in the middle of the tomb chamber, may thus be traced as far back as Late Helladic I and continues down into Late Helladic III. The custom of burying the dead in a shaft within the tomb chamber cannot be claimed to go farther back than Late Helladic II, cf. *Royal Tombs*, p. 25.

The burial customs described by WACE, *Chamber Tombs*, p. 143 ff., for Mycenaean chamber tombs applies in the main to our sepulchres. Two features, however, demand some additional comment. The discovery of a wooden coffin enclosing a skeleton in tomb No. 8 has already been described above, p. 111 ff. Burial in a coffin is a mode of internment that apparently never became prevalent in Greece during the Mycenaean age — I am inclined to regard it as a custom taken over from Egypt. There are other, more sporadic peculiarities in certain chamber tombs — must they, too, be explained in the same manner?

As is well known, it was part of the elaborate burial ceremony in Egypt that the dead was transported in his coffin to the tomb on a sledge pulled by oxen: "Sie ziehen den Gelobten zum schönen Westen, zu seinem ewigen Wohnsitz, damit er sich zu seinen Vätern und seinen Müttern geselle, und die Herren des Totenreichs 'Willkommen, willkommen!' zu ihm sagen", as it is said in a tombal text, Berlin 12412, from the 19th Dynasty, cf. ERMAN-RANKE, *Aegypten und aegyptisches Leben im Altertum*, p. 364. The burial sledge with its team of four oxen is a familiar feature in Egyptian tomb representations. Reference may be made to the representation in a tomb from the beginning of the 19th Dynasty (Fig. 120: 2), here reproduced after fig. 163 in the work of ERMAN-RANKE, which depicts in a continuous manner the ceremony at the internment. Farthest to the left is a scene showing the actual transportation of the dead resting in his mummy coffin, placed in a boat, and this in its turn resting on a sledge pulled by four oxen. In the scene to the right we are, on the other hand, removed to the place in front of the tomb chamber, situated in a rocky precipice, depicted farthest to the right. The tomb façade itself is seen en face according to the Egyptian scheme of representation, depicted close by the rocky precipice. And adjoining to it stands the stela, also seen from in front, which ought to be thought of as placed at the side of the entrance. On a low podium of heaped-up sand, a priest is visible, masked as Anubis, behind the mummy. In front of the mummy is a heap of various gifts, behind which the bald Sem is placed, dressed in a leopard skin. Behind him stand the officiating priest with his book and the lamenting men and women.

The representation taken as a whole shows an unmistakable resemblance to the well-known representation on the Hagia Triada sarcophagus, (Fig. 120: 1), as PARIBENI has already pointed out, *Monumenti Antichi* XIX, p. 15 ff. Attention may be drawn to the tomb façade farthest to the right. It is the entrance to a tomb lined with stucco, and it is of exactly the same kind as the one BLEGEN found in tomb No. 2 in the Argive Heraeum, adorned with a fresco showing spirals of identical form to those on the sarcophagus, cf. BLEGEN, *Prosymna*, Plan 39. In front of this tombal façade the dead appears in an upright position, obviously standing in a depression — the isocephaly is broken. He is represented without arms, precisely as the mummy in the Egyptian representation. A comparison may be drawn between the tree in front of him and the garden which, though absent from the Egyptian representation here reproduced, occurs in several others, cf. PARIBENI, *l.c.*, p. 21. Behind the tree appears an altar or sacrificial table, on which, however, no sacrificial gifts have yet been placed as on the Egyptian one, but they are plainly visible on the sarcophagus to the left of the step altar, i.a. a boat, being brought by officiating persons. These are dressed in animal skins. Attention may be called to the fact that the animal skin was used

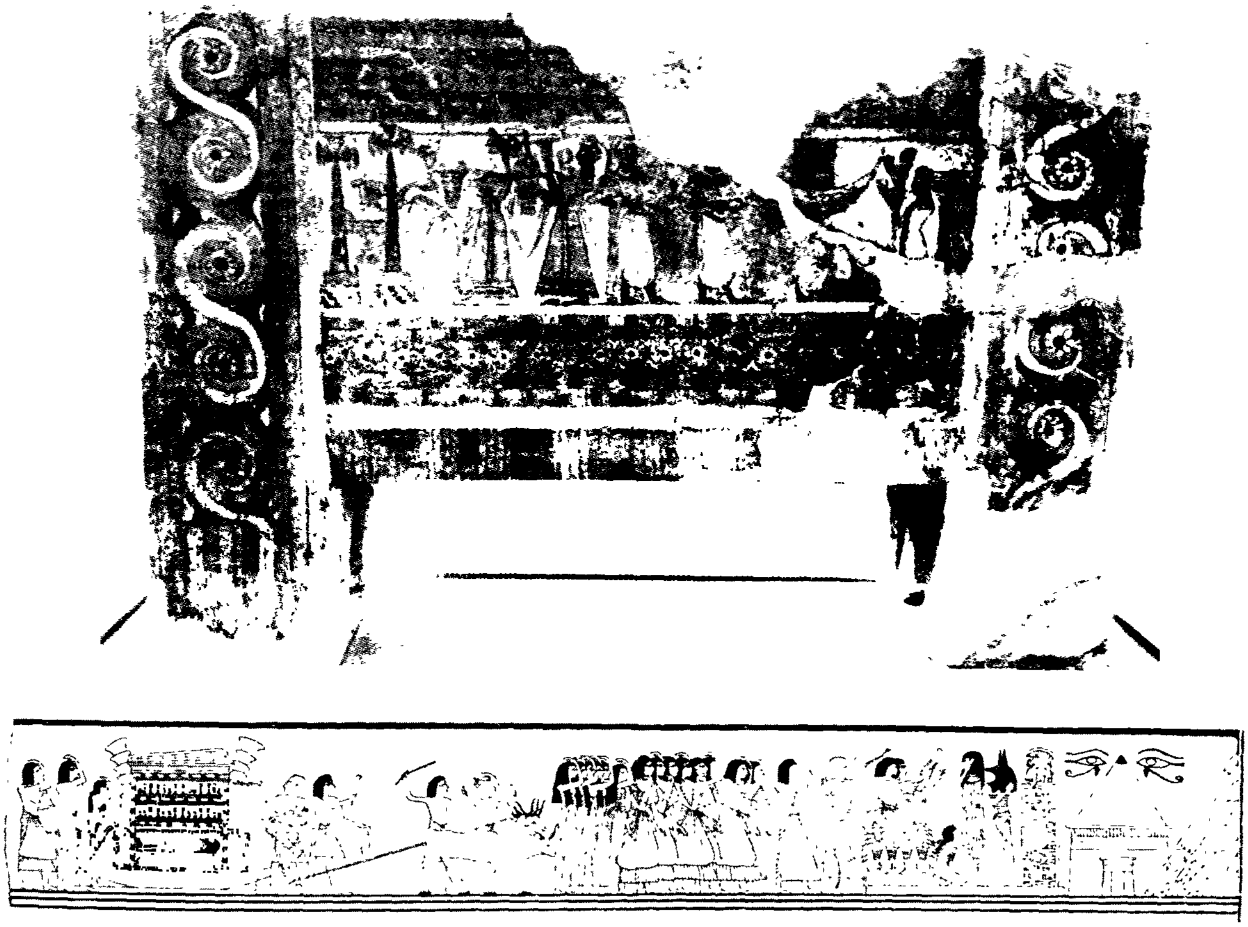


Fig. 120. 1 Hagia Triada sarcophagus
2 Egyptian representation in a tomb from the beginning of the 19th Dynasty

in Egypt as a vestment in religious ceremonies, especially in the cult of the dead and in the cult of Osiris, connected with the former. There is no reason here to enter into the many different interpretations of the whole representation which have been made; I confine myself to referring to NILSSON, *Minoan-Mycenaean Religion*, p. 368 ff.

The two parallel representations, in the Egyptian tomb and on the Cretan sarcophagus, afford us a valuable indication as to the direction in which we must seek the explanation of certain peculiar features of our tombs referred to in the preceding pages. If the wooden coffin in our tomb No. 8 corresponds to an Egyptian mummy coffin, it would seem natural to interpret the grooves that occur in the stomion of several tombs as grooves for skid poles. However, it must then be observed, that under such circumstances part of the burial ceremony must have taken place in the tomb itself, which consists of two chambers in the two tombs at Dendra which possess such grooves. Since these lead all the way into the accessory chamber, we have probably to consider this as the real sanctuary.

If we have thus been able to show quite plausibly that a coffin was sometimes used at burials, the question arises as to whether we may not consider the wooden remains found by BLEGEN in certain tombs in the Argive Heraeum as sledges instead of biers, cf. *Prosymna,* p. 249. The long laths at the bottom and the end pieces on top of them in tomb 29, cf. plan 11, might possibly be interpreted in this way, but, conversely, it is probably easier to explain the three pieces perpendicular to the long laths as the legs of a litter that has subsequently crumbled — not as handles, as BLEGEN seems inclined to believe, for if such had been the case the bier would have been too wide to gain admittance through the stomion in a horizontal position. Absolute certainty may not be attainable on this point at present but one may hope that future excavations will elucidate the matter.

If the above explanation of the grooves in the stomion is correct, we have additional proof of the cultural influence of Egypt upon the Greek Mainland. The belief in an after-life and its expression in a highly developed burial ritual are, as is well known, of high antiquity in Egypt, and that the burial ritual and the associated complex of ideas on the Greek Mainland were influenced from Egypt is less surprising than that Crete with its more highly developed civilization should have received such profound influences from Egypt as the Hagia Triada sarcophagus clearly reveals. More than one obscure point appears in a new light if it is possible to prove Egyptian parallels. In another connection I have pointed to a detail in tomb No. 2 at Dendra, cf. *Royal Tombs*, p. 115 f. I refer to the group of seven holes in the wall of the tomb above the hearth or altar in the so-called 'Cenotaph', which showed a resemblance to the constellation, of the 'Great Bear'. This constellation, sometimes in the form of "Schenkel des nördlichen Himmels", is an Egyptian symbol of immortality and is met with in Egyptian tombs. The sculptured slabs which Lord Elgin brought home from Greece, originally came, as researches have shown, cf. EVANS, *Palace of Minos*, III, p. 193, note 3, from the Treasury of Atreus in Mycenae having once adorned a Mycenaean tomb, and thus permit us, in my opinion, to surmise a further parallel. These include the forepart of a bull sprinkled with star-like ornaments. Personally I do not believe that these ornaments are merely intended to suggest iridescent hues, but interpret them as stars similar to those which characterise the Egyptian cow Hathor, personifying the nocturnal sky — night and death were identified with each other by the Egyptians. Compare *Dragma, Martino P. Nilsson dedicatum*, p. 400.

A summary having been presented above upon the actual construction of our chamber tombs, we may now turn to the problem of the origin of the Mycenaean chamber tombs. The question is by no means settled by merely referring to the custom of burying the dead in crevices and natural caves, a practice generally prevalent in primitive cultures. The method of burial obtaining in the Middle-Helladic period, cf. *Asine*, p. 341 ff., is now so well known to us as to justify the positive statement that the chamber tombs came into use suddenly and in fully developed form on the Greek Mainland, there being no justification for speaking of any forerunners in the immediately preceding period. Consequently their first appearance offers a fresh problem that demands a further study of the material now available.

V. Origin of the Mycenaean chamber tomb.

THE particularly lively discussion regarding the origin of the bee-hive tomb that has been carried on in the last decades without having hitherto resulted in any generally accepted solution of the problem, has completely overshadowed the question of the origin of the chamber tomb, which, indeed, has hardly even been considered as a problem worthy of any serious discussion. From the purely typological viewpoint, of course, it may be assumed that this latter type of tomb is connected with the natural cave, which was used both as a dwelling and a place of burial in the most widely separated areas as early as the Stone Age. But the fact, already alluded to above, that the Mycenaean chamber tomb shows a more complicated form when it first appears than in the period of its real prevalence clearly shows that its origin presents a problem quite removed from that of a local evolutionary series.

The few attempts to discuss the origin of the chamber tombs are conceived from the viewpoint of the varying degrees of independence as regards the cultural development ascribed to the Mainland as compared with that in Crete. The question has been confined to the following: did the chamber tomb originate on the Greek Mainland, or was it taken over from Crete? A third possibility, that of influence from another quarter, has been wholly disregarded.

WACE considers the first possibility, that the chamber tomb originated on the Greek Mainland, cf. *Chamber Tombs*, p. 125: "It is possible that just as the chamber tombs in Crete seem to have developed from rock shelters, so the chamber tombs of the Mainland may equally well have developed from rock shelters of the type known in E.H. times, as at Zygouries. Further, just as the royal Shaft Graves are elaborate versions of the simple Middle Helladic cist graves, so the Tholos Tombs are elaborate or royal versions of the chamber tombs used for more ordinary folk." It is hardly relevant to deal with the latter part of this hypothesis here, that the bee-hive tombs represent royal versions of the chamber tombs [1], but as regards the former assumption it appears to me to be highly improbable.

These tombs at Zygouries, which WACE cites, three or possibly four in number, have been correctly characterized as "rude cave-ossuaries" by BLEGEN, *Zygouries*, p. 54. They consist of rather large cavities in the rock, roughly oval in shape, each containing the bones of 5 to 15 skeletons. A similar tomb was found by BLEGEN in the Argive Heraeum, which, however, he dates to the Neolithic Period, cf. *Prosymna*, p. 25 f., and one may refer a tomb in Dimini to the same category — cf. the author's survey of Early Helladic tombs, *Asine*, p. 338.

---

[1] Professor A. BOETHIUS has drawn my attention to a passage by Vitruvius, De architectura, II, 1, 5 of a certain importance for the question concerning the origin of the bee-hive tombs. Vitruvius says: Phryges vero, qui campestribus locis sunt habitantes, propter inopiam silvarum egentes materiae eligunt tumulos naturales eosque medios fossura detegentes et itinera perfodientes dilatant spatia, quantum natura loci patitur. Insuper autem stipites inter se religantes metas efficiunt, quas harundinibus et sarmentis tegentes exaggerant supra habitationes e terra maximos grumos. ita

Another Early Helladic type of tomb occurs in the rock-cut tombs found in Old-Corinth, comprised of two chambers, which open on opposite sides of the same rectangular, vertical shaft. In form they are closely reminiscent of the tombs excavated by PAPAVASILEIOU in Euboea, which, however, have only one chamber opening from the rectangular, vertical shaft.

Neither of these tomb types, so far as is known, survives into the Middle Helladic Period, the burial methods of which are known at present incomparably better than those of the Early Helladic Period — cf. *Asine*, p. 341 ff.

To infer a connection between the rock shelters or cave-ossuaries of the Neolithic and Early Helladic Period and the Mycenaean chamber tombs seems to me, under such circumstances, all the more unjustified since the oldest Mycenaean chamber tombs, as has been shown above, by no means originated in imitation of natural caves, but instead appear as formally rich, architectural creations. Only gradually during Late Helladic III do they show a tendency to approach the natural cave in certain instances; in Kephallenia KYPARISSIS has even found traces of ten Mycenaean burials from Late Helladic in a natural cave, cf. *Archaiologikon Deltion* 1922, p. 92 ff.

The alternative view, that the Mycenaean chamber tomb originated in Crete, is maintained by EVANS, cf. f. inst. *Palace of Minos,* II, p. 557: "The typical class of rock-cut chamber tombs that were of such wholesale construction at Mycenae and elsewhere in Mainland Greece from the beginning of the Late Minoan Age onwards is . . . shown to go back in Crete at least to the eighteenth century before our era."

In the Neolithic Age the natural cave served in Crete not only as a dwelling, but also as a burial place, e.g. in Magasa. In the early Bronze Age, when the caves were no longer used as dwellings, they still served to a great extent as burial places, as in Miamou, Trapeza, Epano-Zakro, Sphoungaras, Hagios Nikolaos in the vicinity of Palaikastro, in Mochlos, in Hagia Photia and in Gournia. On the northern coast of Crete and in the more central parts of the island the cave still remains in frequent use as a burial place among the other types of tombs at the beginning of the Middle Minoan Period. To judge from some of the oldest tombs in the Mavro Spelio necropolis near Knossos, it became the practice as early as Middle Minoan II to deepen natural caves by cutting into the rocky slopes, and from this time on tombs are met with that "are foreshadowing the later chamber tombs" according to PENDLEBURY, *The Archaeology of Crete*, p. 133. It is

---

hiemes calidissimas, aestates frigidissimas efficiunt tectorum iationes — It seems highly probable to me that the beehive tombs are adaptations of dwelling houses of the kind described by Vitruvius as characteristic in later times of the Phrygians exactly these tombs that have caused EVANS to make the statement quoted above. A perusal of the publication on this excavation by FORSDYKE, *BSA* XXVII, p. 243 ff., shows, however, that the regular chamber tombs belong to Late Minoan, the older ones are in part rock-caverns of very irregular form, enlarged by human hands, and concerning which one may well state with PENDLEBURY that they "are foreshadowing the later chamber tombs", though it is impossible to say that these "go back in Crete at least to the eighteenth century before our era.". EVANS emphasizes that these tombs have their "real prototypes" in the Middle Empire Egyptian Cemeteries. He also points out that some of the early tombs of Mavro Spelio are approached by a mere landing, as is the case in Egypt, and furthermore that in several cases the entrance led to more than one chamber. He adds the following: "The sepulchral pits (in the chambers) supply a further parallel." To this must also be added that in one tomb, No. 17, there occurred sealstones presenting types copied from 12th Dynasty scarabs. The indication this affords is worthy of attention and must be kept in mind.

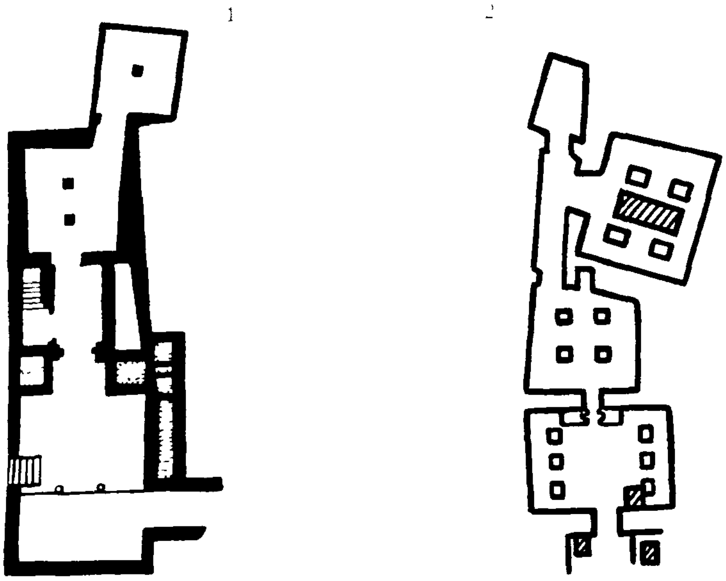


Fig. 121 1) The 'Temple Tomb' at Knossos
2) Kakemet's tomb at Assuan

It is pertinent in this connection to emphasize the influence from Egypt on other Cretan types of tombs. There is no doubt about Egyptian influence with regard to the so-called 'Temple Tomb' south of the Palace in Knossos, which may be dated to the transition from Middle Minoan III *b* to Late Minoan I *a*. EVANS, *Palace of Minos*, IV, p. 962 ff., points to a series of indications, the evidential force of which may be strengthened by comparing the tomb structure in its entirety with a similar structure in Egypt, Kakemet's tomb at Assuan. Lady WILLIAM CECIL dates this tomb in the following manner: "The tomb, I should say, together with the untouched burial to be of the 6th Dynasty, but re-used in later times — the existing paintings and inscriptions being of the 19th or 20th Dynasty", *Annales du Service des Antiquités de l'Egypte*, IV, p. 64. PORTER and MOSS, *Topographical Bibliography of ancient Egyptian hieroglyphic Texts, Reliefs and Paintings*, V, p. 240, correct the dating to Middle Kingdom and later. The plans of the two tombs with their vestibule or open court, a mortuary chapel, and a burial chamber, are here reproduced side by side (Fig. 121).

As regards the King's tomb in Isopata (Fig. 122: 1), which probably ought to be dated slightly later than the Temple Tomb, cf. PENDLEBURY, *op.c.*, p. 195, EVANS himself has pointed to the similarity in plan with an Egyptian tomb in Havara, originating in the 12th Dynasty, cf. *Archaeologia*, Vol. 59, p. 559. There is an excellent parallel to the form of the tomb chamber itself in a mortuary chapel at El-Kâb from the time of Ramesses II, cf. Porter—Moss, *Bibliography* V, p. 186 f. (Fig. 122: 2). The tomb is characterized by a niche in the inner wall of the chamber and the vestibule is also furnished with two niches.

In this connection a further observation may be added regarding the newly discovered tholos tomb near Knossos, published by Hutchinson in *The Illustrated London News* 1940, March 2, p. 284 (Fig. 122: 3). The arrangemeent of the tomb is wholly reminiscent of the King's tomb in Isopata, the only difference being that the chamber here is round instead of rectangular. The vestibule in the bee-hive tomb is also furnished with two lateral niches. In the interior of the round chamber there are at least two deep burial shafts with lateral ledges for cover-slabs of the same kind as in our tomb No. 9 in Dendra. I find it difficult to be convinced by the reason Hutchinson has given for his high dating; for my part I cannot regard this tomb as the prototype of the bee-hive tombs on the Greek Mainland, being most inclined to date it to about the same time as the Isopata tomb, possibly even to Late Minoan II. The finds of sherds are too feeble evidence to justify the high dating. In addition the bee-hive tomb in Praisos, which is dated to Late Minoan III, offers an excellent parallel to the Knossos tomb, cf. Savignoni, *Monumenti Antichi* XIV, p. 664 (Fig. 122: 4). A covered vestibule with broad niches also occurred here. Savignoni is en-

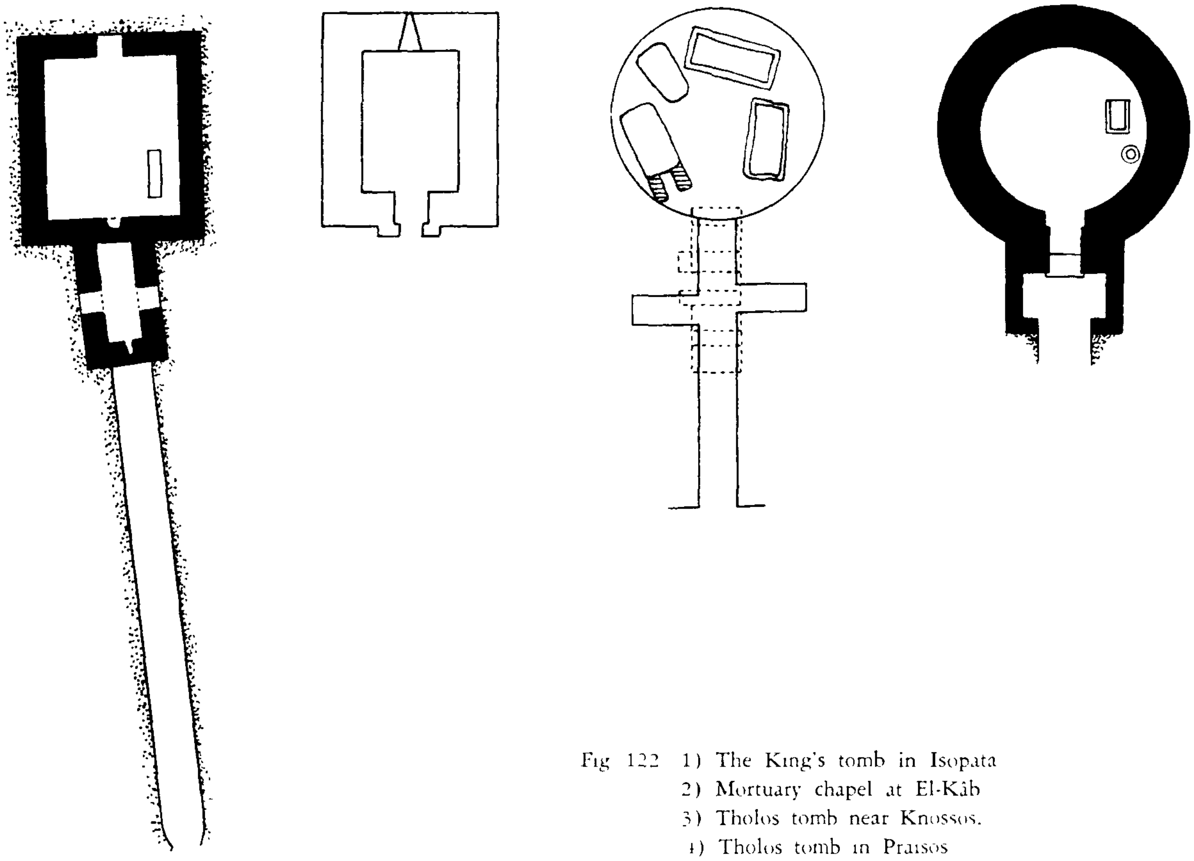


Fig 122 1) The King's tomb in Isopata
2) Mortuary chapel at El-Kâb
3) Tholos tomb near Knossos.
4) Tholos tomb in Praisos

tirely justified in stating that this type with vestibule is foreign to Greece, but, on the other hand, is normal in Egypt. SAVIGNONI says, *l.c.*, p. 665: "La camera ad alveare . . . . a Praesos è preceduta da un vestibolo o anticamera rettangolare che si allarga in senso normale all'asse longitudinale dell'edificio, affatto insolita nelle tombe costruite su suolo greco, caratteristica invece delle egiziane, dove serviva da capella per le riunioni e le ceremonie funebri. Basta per ciò citare l'esempio di un'altra delle tombe tebane del nuovo impero, la quale anzi ci presenta riunite le due qualità tipiche dell'anticamera rettangolare e della camera ovale (PERROT-CHIPIEZ, *Histoire de l'Art dans l'Antiquité*, I, p. 302 ff., fig. 192)" [1]. I entirely agree with SAVIGNONI when he says in continuation: "Questi riscontri devono incorragiarci ad ammettere un'analoga origine per gli altri tipi di tombe micenee."

A similar vestibule is also sometimes met with in the regular rock-cut chamber tombs, which in Crete became fully developed during Late Minoan I, e.g. in chamber tomb No. 1 in the Isopata necropolis. It also occurs in a few Mycenaean tombs. A covered vestibule is met with in three tombs in the Ialysos necropolis in the island of Rhodes, namely in tombs Nos. 19, 24, and 43, cf. MAIURI, in *Annuario della R. Scuola Archeologica di Atene* VI—VII, p. 236. Tomb No. 28 in the Kolonaki necropolis at Thebes has also a similar arrangement, cf. KERAMOPOULOS, in *Archaiologikon Deltion* 1917, p. 204 f. and fig. 89, p. 124. An arrangement, reminiscent of a vestibule, also occurs in tomb 515 in the Kalkani necropolis at Mycenae, constructed during Late Helladic II at the latest, with the difference, however, that the vestibule has had no roof in this instance, cf. WACE, *Chamber Tombs*, p. 51. It must be observed here that this vestibule has the same arrangement with steps and side benches as our tomb No. 6 in Dendra. We are thus justified in regarding such an arrangement as a rudiment of the Egyptian vestibule.

That the Mycenaean chamber tombs originated in Crete is a hypothesis which, in view of what has been said above, may be regarded as correct *only* with the modification that these Cretan chamber tombs in their turn have been strongly influenced from Egypt. However, those chamber tombs in Greece whose ground plans deviate from the typical form have no parallels in Crete, as far as the tomb material is known at present. This is a circumstance that decidedly speaks against the assumption that the Greek Mainland has adopted the tomb type from Crete. The lessons afforded by the Cretan material invite, however, an attempt to find out whether there possibly exist closer parallels between the Mainland and Egypt, without postulating Crete as an intermediary link.

As early as the period of the Old Kingdom the rock-tomb cut out of a rocky wall becomes the typical form of private tomb in Egypt. It is interesting to observe that the first rock-cut tombs obviously are intimately connected with the mastabas and give an impression of the older, free-standing, built-up mastaba tomb even as regards its chapel, and that the chapel is retained in the rock-cut tombs even when it has disappeared in the real mastaba. Especially toward the end of the Old Kingdom the rock-cut tombs assume a greater importance in Upper Egypt, obviously in order not to waste arable land down in the valley. There is often a forecourt in front of the tombs cut into a steep rock wall. This type of tomb is further developed in the period of the Middle Kingdom. In the later tombs one sometimes finds a small vestibule in front of the entrance, to which an extensive ramp leads. A long corridor first replaces the vestibule in the 12th Dynasty, opening into a chapel of medium size, from which a shaft leads down to the mummy chamber. From the time of Thutmosis I onward the kings were laid to rest in rock-cut tombs in the gorge that is now called the Valley of the Kings. The oldest royal tombs of this kind have, true enough, a ground plan with several chambers that are not specifically arranged, and planned without regard to a central axis, but it cannot be doubted that they are related to the older rock-cut tombs. Thousands of Egyptian tombs have been driven into the mountains and the basic elements of those tombs are the broad hall or chamber and the niche in the rear wall. The corridor that leads into the tomb proper is conditioned by the steep rock wall, and it is not to be considered as a constitutive element of these rock-cut tombs.

---

[1] EVANS, *Palace of Minos*, III, p. 201 f. has assumed a similar vestibule in the 'Treasury of Atreus' in its original shape, in which the great bull reliefs, brought by Lord Elgin to England, were placed, an arrangement exactly corresponding to that in the north entrance of the Palace in Knossos. Such an *atrium* with the engaged columns of the facade suggest a comparison with the columnar porches that were the regular adjunct of the rock tombs of Middle Empire Egypt'

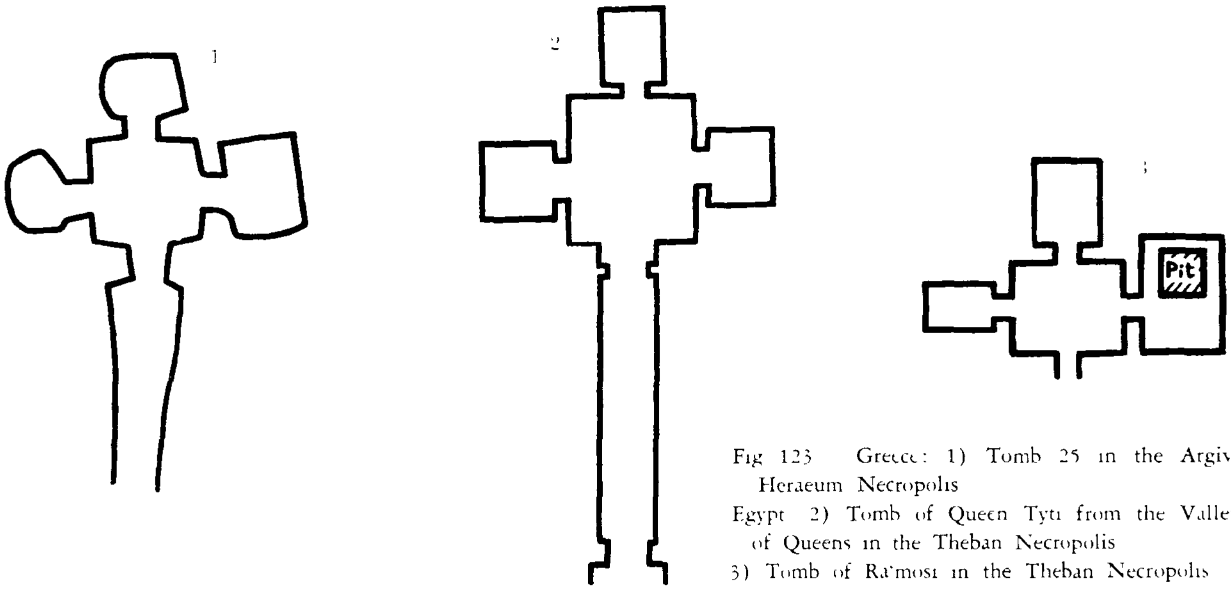


Fig 123 Greece: 1) Tomb 25 in the Argive Heraeum Necropolis
Egypt 2) Tomb of Queen Tyti from the Valley of Queens in the Theban Necropolis
3) Tomb of Ra'mosi in the Theban Necropolis

The abnormal Mycenaean chamber tombs will now be dealt with from the viewpoint of the comparable Egyptian material at my disposal. The plans of Egyptian tombs are reproduced from PORTER and MOSS, *Topographical Bibliography of ancient Egyptian hieroglyphic Texts, Reliefs and Paintings* I—VI, Oxford 1927—1939. It is a disadvantage that no measurements are there given, but in this case the plans themselves are the important subject.

One of the most interesting Mycenaean tombs is undoubtedly tomb No. 25 in the necropolis in the Argive Heraeum, cf. BLEGEN, *Prosymna*, p. 86 ff., Plan 14 (Fig. 123: 1). As regards the dating of this tomb BLEGEN, in referring to the find material, says on p. 91: "There can be no doubt that the construction of the tomb is to be referred back to the end of the Middle Helladic Period or the very beginning of the Late Helladic Period." Such an arrangement as occurs here with a central room from which side rooms open in the three inner walls we know to be existent in Egypt since the period of the Old Kingdom. The Tomb of Queen Tyti from the Valley of Queens in the Theban Necropolis, Ramesside, cf. PORTER—MOSS, I, p. 41 (Fig. 123: 2), is reproduced here as a parallel. Of this tomb BÉNÉDITE says in *Mémoires de la Mission archéologique au Caire*, V, p. 393: "un monument que nous pouvons considérer comme le type le plus complet de ces tombeaux de reines, conçus à peu près sur un même plan." Another example is offered by the tomb of Ra'-mosi, "Great Scribe of the king", No. 132 in the same necropolis, cf. PORTER—MOSS, I, p. 143 (Fig. 123: 3). In the floor of the right side chamber of this tomb, adjacent to tombs from the time of Thutmosis III and Ramesses II, a shaft has later been sunk, and the tomb has again been used in the time of Taharqa during the first half of the 7th century. Cf. also the tomb of Thery in Memphis, PORTER—MOSS, III, p. 65, fig. p. 60.

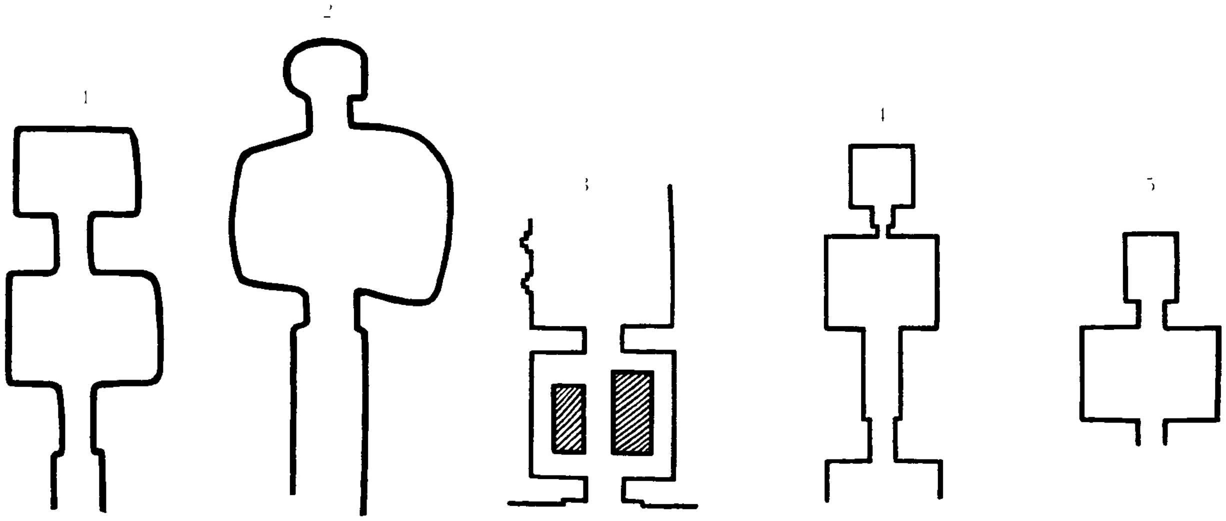


Fig. 124. Greece. 1) Tomb Tsountas 5 in Mycenae. 2) Tomb 518 in the Chalkani Necropolis at Mycenae. Egypt. 3) Tomb in Deir-el-Bersha. 4) Tomb of Tutu in Deir Rifa. 5) Tomb in Thebes.

We now pass to chamber tombs with one accessory chamber and deal first with the type that has an accessory chamber on the main entrance axis. Two Mycenaean chamber tombs of this kind are known to me, both in Mycenae, being the tomb published by TSOUNTAS as No. 5, *Ephemeris Archaiologiki* 1888, p. 137 f., and tomb 518 in the Kalkani necropolis, cf. WACE, *Chamber Tombs*, p. 75 f. (Fig. 124: 1—2). As regards the age of these tombs, we know for certain that tomb 518 must have been constructed during Late Helladic I, since the tomb contains "an exceedingly rich collection of vases of the Late Helladic I and Late Helladic II periods", as well as Late Helladic III pottery from later burials. As regards the tomb published by TSOUNTAS, the account of the excavation leaves us, unfortunately, in some uncertainty, since the pottery found in the tomb has not been published, but to judge from the figurines discovered it must still have been used during Late Helladic III, though this does not exclude the fact that it, too, was constructed at a much earlier date.

There are many examples of this type among the Egyptian rock-cut tombs from which I have here chosen for purposes of comparison a tomb from the 12th Dynasty in Deir-el-Bersha — the inner chamber has lost its rear wall, cf. PORTER—MOSS, IV, p. 181, tomb No. 5 (Fig. 124: 3), one in Deir Rîfa, tomb of Tutu, from the period of the New Kingdom, cf. PORTER—MOSS, V, p. 1 f. (Fig. 124: 4) and one in Thebes from the time of Ramesses II, cf. PORTER—MOSS, I, p. 55, No. 6 (Fig. 124: 5).

A comparatively large number of the abnormal Mycenaean chamber tombs have an accessory lateral chamber. We have to mention first the two recently investigated tombs in Dendra, tomb No. 6 and tomb No. 8 (Fig. 125: 1—2), which, according to what has been said above, are to be dated to Late Helladic I. In both these tombs the accessory chamber is situated on the right side; a similar arrangement is found in TSOUNTAS' tomb No. 27 in Mycenae, cf. *Ephemeris Archaiologiki* 1888, p. 145 ff. (Fig. 125: 3), which, like the other tombs excavated by him, cannot be dated with certainty, because the pottery found in the tomb has not been published, but the rich finds of ivory objects and other valuables show that it must be dated at least as high as Late Helladic II. BLEGEN dates his tomb No. 36 in the Argive Heraeum to Late Helladic II, *Prosymna*, p. 122 (Fig. 125: 4). To the same period or to the very beginning of the next period the current dating now refers the two largest bee-hive tombs known, the 'Treasury of Atreus' and the bee-hive tomb in Orchomenos, the only ones of their kind, which have a side chamber, in both instances situated in exactly the same place, to the right of the entrance (Fig. 125: 8—9).

Three of the tombs in the Argive Heraeum necropolis have a side chamber situated to the left. BLEGEN in dating these refers tomb No. 26 to Late Helladic I, *Prosymna*, p. 96 f. (Fig. 125: 5), tomb No. 3 (Fig. 125: 6) that had collapsed and contained remains from the Hellenistic period, among other things a Sicyonian coin, is difficult to date, but the Mycenaean finds from this tomb included a dagger that "certainly dates from the Second Late Helladic period at the latest" (BLEGEN, *Prosymna*, p. 184), and some of the pottery must also be dated up to Late Helladic II. The third tomb, No. 33 (Fig. 125: 7), BLEGEN, *Prosymna*, p. 108, dates to Late Helladic III, but the oldest remains "are without doubt to be assigned to the initial phases of that period".

The type of tomb here in question, consisting of a main chamber with an accessory chamber, is especially frequent in Egypt and it is only necessary to mention a few examples here. Tombs from the time of the Old Kingdom, to which we refer, are Pepy-'ankh's tomb in Quseir el-Amarna, cf. PORTER—MOSS, IV, p. 239 f. (Fig. 125: 10), and a tomb at El-Kâb, dated to Amosis, Amenophis I, and Thutmosis I, thus to the 16th century, cf. PORTER—MOSS, V, p. 178, tomb No. 5 (Fig. 125: 11), and finally a tomb in Thebes, Nos.

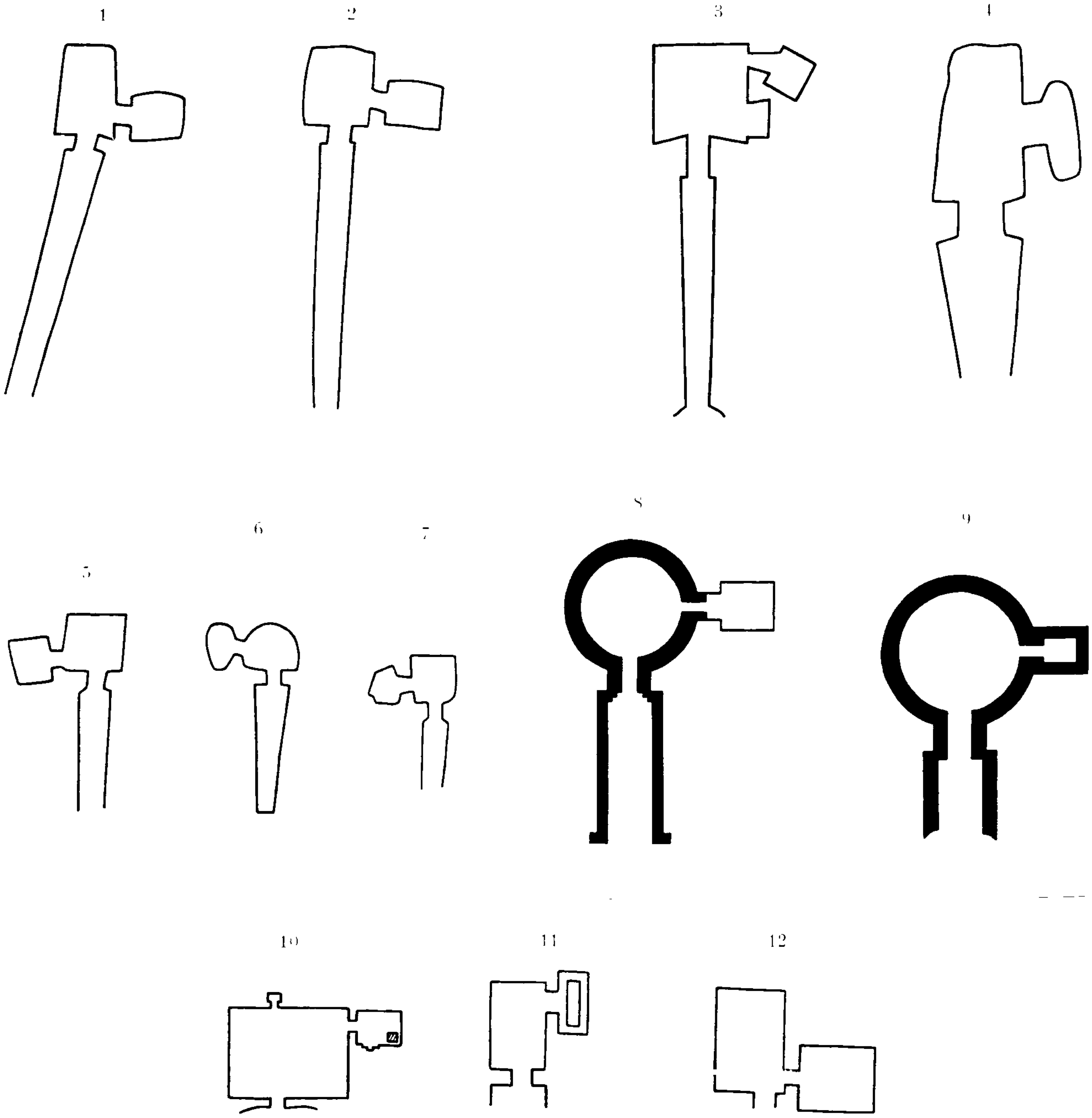


Fig 125.

Greece
1) Tomb no 6 in Dendra
2) Tomb no 8 in Dendra
3) Tomb Tsountas 27 ss in Mycenae
4) Tomb 36 in the Argive Heraeum
5) Tomb 26 in the Argive Heraeum
6) Tomb 3 in the Argive Heraeum
7) Tomb 33 in the Argive Heraeum
8) 'Treasury of Atreus' in Mycenae
9) The bee-hive tomb in Orchomenos

Egypt
10) Tomb of Pepy-ankh in Quseir el-Amarna.
11) Tomb in El-Kâb.
12) Tomb in Thebes

128—129, from the time of Thutmosis III, cf. Porter—Moss, I, p. 141 (Fig. 125: 12).

In the Kolonaki necropolis at Thebes Keramopoulos found several tombs of striking appearance with the rectangular tomb chamber transverse to the entrance, a common type of tomb in Egypt. In a number of instances a niche occurs in the rear wall; compare Keramopoulos tomb No. 4, *Archaiologikon Deltion* 1917, p. 124 (Fig. 126: 1), with *e.g.* a tomb from the 6th Dynasty in Deir-el-Gabrâwi, Porter—Moss, IV, p. 240, tomb No. 12 (Fig. 126: 2). The same type of tomb survives and is most conspicuously represented in the period of the New Kingdom, cf. *e.g.* tomb No. 10 in the necropolis of Thebes from the time of Ramesses II, Porter—Moss, I, p. 56 (Fig. 126: 3). The niche of these Egyptian tombs may be a simplification of the chamber planned around the main axis of the tomb, examples of which we have already recorded.

Keramopoulos' tomb No. 26, *Archaiologikon Deltion* 1917, p. 124 (Fig. 127: 1) may be compared with Pepynenʿankh's tomb in Hierakonpolis from the time of the 6th Dynasty, Porter—Moss, V, p. 197 f. (Fig. 127: 2).

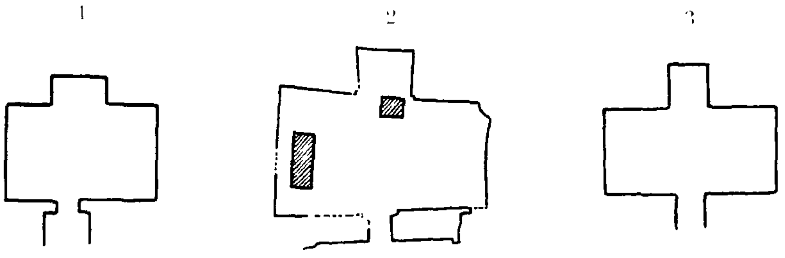


Fig 126

Greece:
1) Tomb 4 in the Kolonaki necropolis at Thebes

Egypt
2) Tomb in Deir el Gabrâwi
3) Tomb in the necropolis of Thebes

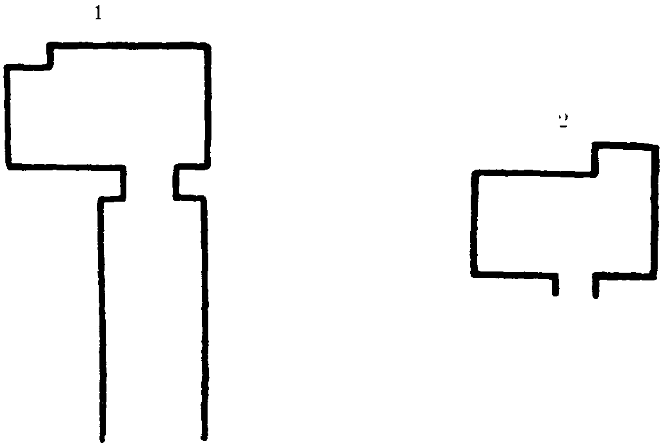


Fig 127.

Greece:
1) Tomb 26 in the Kolonaki necropolis at Thebes.

Egypt.
2) Tomb of Pepynenʿankh in Hierakonpolis

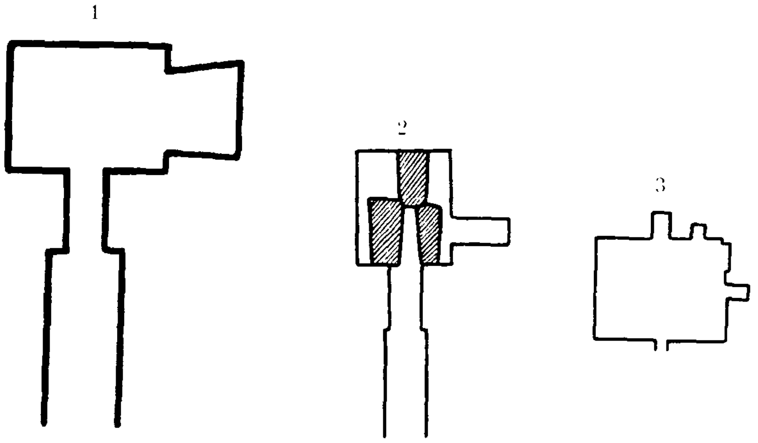


Fig 128

Greece:
1) Tomb Tsountas ^{42}, ss in Mycenae.
2) Tomb Tsountas ^{47} ss in Mycenae

Egypt.
3) Tomb in Meir.

Among the tombs excavated by TSOUNTAS at Mycenae there are two, tombs Nos. 42 and 47, *Ephemeris Archaiologiki* 1888, p. 150 and 152 (Figs. 128: 1—2), which show large niches in the wall to the right of the entrance instead of true side chambers with a regular doorway. This feature is also well known from Egypt, cf. *e.g.* a tomb from the time of Sesostris II in Meir, PORTER—MOSS, IV. p. 252, Tomb C 1 (Fig. 128: 3).

Our survey of the chamber tombs on the Greek Mainland which deviate from the normal type has thus shown that parallels for every detail are to be found in Egypt. I have been desirous of showing that the Egyptian types may be dated to the period before the beginning of Late Helladic — in many instances we may go back as far as to the period of the Old Kingdom. It is obvious that, as regards Egypt, we have to deal with an uninterrupted tradition, which permits the same types of tombs to appear even as late as the period of the New Kingdom.

There is one feature that deserves special attention, it is the question of the access to the actual tomb chamber. I do not regard the passage that leads to the chamber, as a constitutive element of the tomb structure. If the tomb chamber is to be cut into a rocky precipice, as is the rule in Egypt, where the tombs are situated in the steep escarpments that border the Nile valley, no long passage is necessary to obtain the requisite depth for the cutting out of the chamber. On the other hand, a ramp is sometimes needed for the approach up to the entrance that gives access to the chamber. In order to obtain a chamber whose entrance is sufficiently protected on the outer side, a covered passage instead of a ramp was made in front of the actual entrance to the chamber. In Greece where the chamber tombs as a rule are situated in rather slightly sloping ground, the dromos, as is self-evident, is necessary for obtaining a sufficient depth for the chamber. It is significant that many of the older tombs with a short and broad dromos have steps as an aid in securing sufficient depth, an arrangement that is also found in Egypt. The long, narrow passage, more or less horizontal, denotes a later development. Attention may also be drawn to the occurrence of Mycenaean chamber tombs without a real dromos *e.g.* the tombs excavated by KYPARISSIS in the island of Kephallenia, cf. *Archaiologikon Deltion* 1919, p. 92 f. They are here hewn in a rocky precipice as in Egypt. That the passage was not considered as an essential element, is also evident from the fact that tombs from the close of the Mycenaean period, when general prosperity was sharply declining, sometimes have a short dromos and stairs like the oldest chamber tombs, cf. e.g. the late tomb II: 1 at Asine, *Asine*, p. 191 and 421 (cf. also above p. 154).

We may now summarize the results of what has been said above. Upon its first appearance the Mycenaean chamber tomb has no connection with the Middle Helladic mode of burial. The oldest tombs are of a much more elaborate architectural cast than the later ones, thanks to normalization. This richer architectural cast has no direct models or parallels in Crete, as far as the tomb material is hitherto known to us, while Egypt offers models and parallels in every detail. We are compelled to assume that the Mycenaean chamber tomb is directly dependent on the Egyptian rock-cut tomb. At the same time it may be emphasized that the Egyptian form of burial has also influenced the Cretan and has, among other things, given rise in Crete to the real chamber tomb, which is here directly linked up with the ancient custom of burying the dead in natural caves.

It is superfluous to dwell here upon the connections between Crete and Egypt — they run as a continuous thread through EVANS' great work, *The Palace of Minos at Knossos.* On the other hand, the direct connections between the Greek Mainland and Egypt, as far as may be established for the beginning of the Mycenaean age, deserve to be expressly emphasized.

VI. Mycenae and Egypt,

Direct Contacts in Early and Middle Mycenaean Age.

A fact of the greatest importancce which has not received the attention it deserves, results from PENDLEBURY'S exceedingly valuable classification of Egyptian objects found in the Aegean Area, *Aegyptiaca*, Cambridge 1930. His tables page 114 f. show with perfect clarity that Egyptian objects begin to enter the Greek Mainland at the beginning of the Mycenaean Age. An investigation of the material from Argolis in particular shows that 41 of the 66 items listed by PENDLEBURY are scarabs belonging to the 26th Dynasty, found together at the Argive Heraeum — thus belonging to *one* single find, — while 22, found in different places, are from the 18th Dynasty; with regard to some of these it is expressly stated that they belong to the early years of this Dynasty. There are 20 items altogether in Crete from the time of the 18th Dynasty — of which 15 come from *one* find made in the King's Tomb at Isopata. Even if such statistics, 22 finds from Argolis, 6 from Crete, in themselves should be used with a certain caution, they are nevertheless of particular importance when seen in conjunction with other facts to which we will return later. With regard to Mycenae PENDLEBURY expressly states on p. 53: "From the finds we see that the contacts are confined to the Empire period of Egypt and to the great period of Mycenae. In fact we can go closer and say that with two exceptions, the Early and Middle 18th Dynasty provides our material." [1] It is also of interest to state that of these 22 items from the 18th Dynasty not less than 12 come from chamber tombs, and one or possibly two other items may be added from the tombs here published. The two finds from the period of the Old Kingdom, one from Mycenae and one from Asine, do not prove anything regarding older connections, since it is a question of stone vases which, to judge from the context in which they were found, must have been placed in the tombs as antiquities [2].

A fact which may at first sight cause some surprise was established by WACE and

---

[1] The faience vase from Shaft Grave II that PENDLEBURY lists under No 89, and in which he sees an Egyptian object from the 18th Dynasty, KARO declares to be "kretische Import", *Schachtgräber*, p. 243.

[2] There is no evidence against accepting the opinion expressed by PENDLEBURY regarding the stone vase from chamber tomb No. 2 in Asine, "that the owner with whom it was buried had carried on a little tomb-robbing either when raiding Egypt or when serving Pharaoh as a mercenary" (*Aegyptiaca*, p. 61). Cf. below, p. 181.

BLEGEN: "more than eight times as many Mainland (Helladic) as Cretan (Minoan) vases from Egypt in the period LB (Late Bronze Age) I and II, the sixteenth and fifteenth centuries B.C., are now known" (*Klio* 1939, p. 147)[1]. If pottery is used as evidence for trade and colonization — which seems to me quite justified — this signifies that we have to reckon with direct connections between the Greek Mainland and Egypt exactly during this period, without Crete as an intermediary. We may observe that this is in complete agreement with the statistical results obtained by PENDLEBURY in *Aegyptiaca.*

Quite recently a find has been made which illustrates these connections in a surprising manner and which, to a certain degree, may be said to be most intimately connected with the importation of pottery. Mrs. VIVI LAURENT-TÄCKHOLM has been able to prove the presence of some interesting plants in a mummy coffin in the Egyptian Museum at Stockholm, wchich on the evidence of its other contents can be dated to the 21st or to the end of the 20th Dynasty[2]. This find mainly consists of a marine plant, *Zostera marina* L., common along the European coasts and also recorded from the north and west coasts of Asia Minor. It is not found south of this region. It must have been imported from abroad possibly as packing material, and the nearest conceivable place of origin is Greece. The mummy coffin itself, which gives the impression of being a packing box, is unfortunately inaccessible at present owing to the political situation, and it has not been ascertained of what kind of wood it is made, but it will be closely examined as soon as conditions permit.

In continuing her study Mrs. TÄCKHOLM says on p. 147: "The ancient connections between Egypt and Greece are well known and shown, too, by plant finds. One of the most striking examples is that of the Greek lichens used in Egypt for bread-making. They are still in use in the towns and may be bought under the name of 'Sheba'." The same lichens imported from Greece have been found in tombs as early as the Middle Kingdom by G. SCHWEINFURTH[3]. Greek lichens from the Middle Kingdom were found in El Assassif, Thebes, 1918—19, by an expedition from the Metropolitan Museum, New York, and are also represented in the Egyptian Museum in Stockholm.

The information given is of the very greatest interest, because we thus have definite proof of the importation into Egypt of a Greek product which was generally used in Egyptian economy — Greek lichens — as early as the period of the Middle Kingdom. This fact shows more convincingly than anything else the direct connections and the interest which the Egyptians must have had in maintaining them. Mrs. TÄCKHOLM, whose *Flora of Egypt* is now in print, informs me that various fir-trees, namely *Pinus Pinea* L., *Arcenthos drupacea* Ant. et Ky. and *Juniperus Oxycedrus* subsp. *macrocarpa* Neilr., were probably also imported from Greece. By carefully analysing the remains of plants and the various wooden objects that occur in Egypt, the foreign connections during different periods may thus be determined. This material offers a source of evidence of great value which, as far as I am aware, has been too little utilized by archaeologists. But there is a difficulty in limiting the diffusion areas of the different plants which naturally changed with alterations of the climate. It would appear, however, that these changes in the East Mediterranean area and especially in Greece — with the exception of certain short fluctuations — were insignificant, at least since the beginning of historical times[1].

---

[1] Upon closer examination this fact is not in the least surprising since the distance from Argolis to Egypt is actually not much greater than that from Crete. Seafaring of that time was essentially coastal, the open sea being avoided. The ordinary route was no doubt along the coasts of Asia Minor, Syria and Palestine both from Crete and from the Greek Mainland.

[2] Cf. VIVI LAURENT-TÄCKHOLM, *A Mummy Coffin in the Egyptian Museum, Stockholm, and its Plant Remains*, in *Svensk Botanisk Tidskrift* 1940, p. 141 ff.

[3] Unfortunately SCHWEINFURTH'S paper, *Über Brotkuchen mit Zusatz von Flechten in Ägypten*, in *Archiv für Wirtschaftsforschung im Orient*, III, Berlin 1918, has not been accessible to me.

The archaeological material to which we have referred allows of no ambiguity. It is therefore not surprising if traces should also occur of the same connections between the Aegean area and Egypt in the plastic arts. Since culture and consequently art during the Middle Bronze Age had attained an incomparably higher level in Egypt than on the Greek Mainland it is natural to suppose that Mycenae was the recipient rather than the source of these influences. A certain exchange, however, must not be excluded as is already evident during the reign of Amosis — the founder of the 18th Dynasty (c:a 1580—1558). Two ceremonial weapons bearing his name were discovered in his mother Aahhotep's tomb.

Amosis' name inlaid in silver, with each hieroglyph edged in thin gold, and followed by a lion pursuing a bull and by four grasshoppers executed in the same technique adorned the bronze midrib of the gold edged dagger (Fig. 129: 1)[2]. In the flying gallop of the animals with unnaturally elongated bodies and in the indications of a rocky terrain on either side it is possible to detect a striking similarity to the representations on the well known Mycenaean dagger blades (Fig. 129: 2). It is probable that the actual technique came originally from the Orient, most probably from Syria, but in any case it underwent a special development and is best represented at present from the Greek Mainland. In this instance, however, the work is undoubtedly Egyptian as is demonstrated by the pommel with four Hathor heads. On Amosis' battleaxe a scene occurs below his name in which he is shown holding an enemy by the hair and throwing him to the ground and below this a griffin[3] (Fig. 130: 1) of exactly the same type to be observed on e.g. the dagger blade from Shaft Grave V (Fig. 130: 2) and on a sword blade from Shaft Grave IV at Mycenae. Here they occur in movement, stationary on the axe, in both cases in the best relation to the space available. Since these representations are characteristic of the Minoan-Mycenaean art but lack any parallels or prototypes in the Egyptian the most probable explanation of the two ceremonial weapons of Amosis, made by an Egyptian craftsman — as proved by the hieroglyphs —, is, that Greek originals must have inspired their appearance in the Egyptian repertory.

A complement to these weapons found in Egypt occurs in the famous dagger blade with a Nile landscape from the Fifth Shaft Grave at Mycenae. The representation is executed in exactly the same technique with silver, gold and niello inlay upon a bronze base.

---

[1] Cf. MARIOLOPOULOS, *Étude sur le climat de la Grèce*, Thèse, Paris 1925.

[2] Cf. VERNIER, *Bijoux et Orfèvreries*, in *Cat. Gén. des Antiquités Égyptiennes*, No 52645, pl XLIII

[3] Cf. *ib.*, No 52658, pl XLV

Fish are seen swimming in the river — a common motif in Egyptian art —, papyrus reeds grow along the river bank — exactly as in the Egyptian representions — among which wild cats are stalking ducks — actually they are Egyptian hunting leopards and "Nile-ducks".

Fig. 129. 1. Part of Amosis' dagger from the tomb of queen Aah-hotep
2. Part of inlaid dagger from Shaft Grave IV at Mycenae.

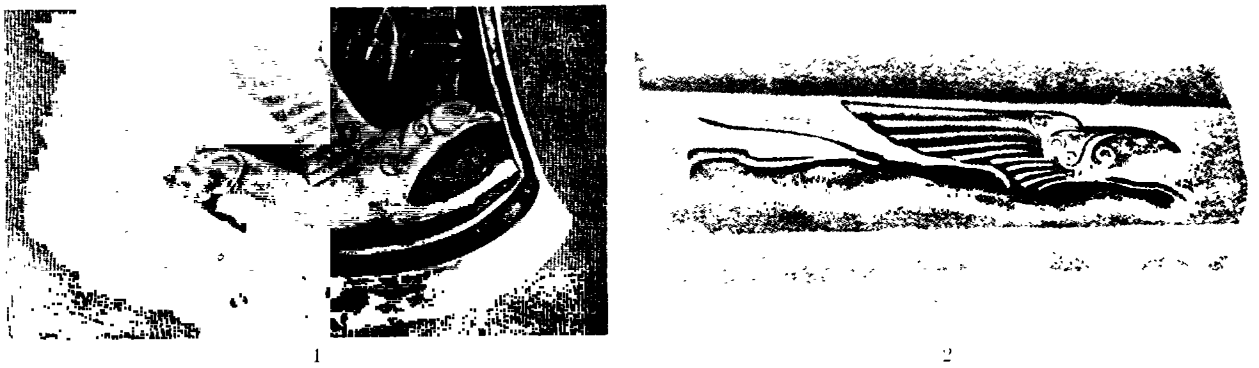


Fig. 130. 1. Part of Amosis' battleaxe from the tomb of queen Aah-hotep
2. Part of dagger-blade from Shaft Grave V at Mycenae

A small wooden box with applique hounds was also found in the same grave (Fig. 131: 1)[1]. SCHWEITZER has clearly shown[2] that the motif is taken from Egypt, summarizing his views as follows: "Ein kretischer Künstler mag es dort (i.e. in Ägypten) auf einem Sarkophag gesehen und aufgegriffen haben. Schakale, die Wächter der Totenstadt, gelegentlich auch Hunde, pflegen liegend auf dem Dach von Grabbauten und Mastabas dargestellt zu werden. Entstanden ist das Motiv schon im alten Reich und lässt sich bis in die Spätzeit herab verfolgen." First it must be noted that the representations do not point

---

[1] Cf. KARO, *Schachtgräber*, Taf. 145, Text p. 144 f.

[2] Cf. SCHWEITZER, *Hunde auf dem Dolch*, in *Ath. Mitt.* 1930, p. 107 ff.

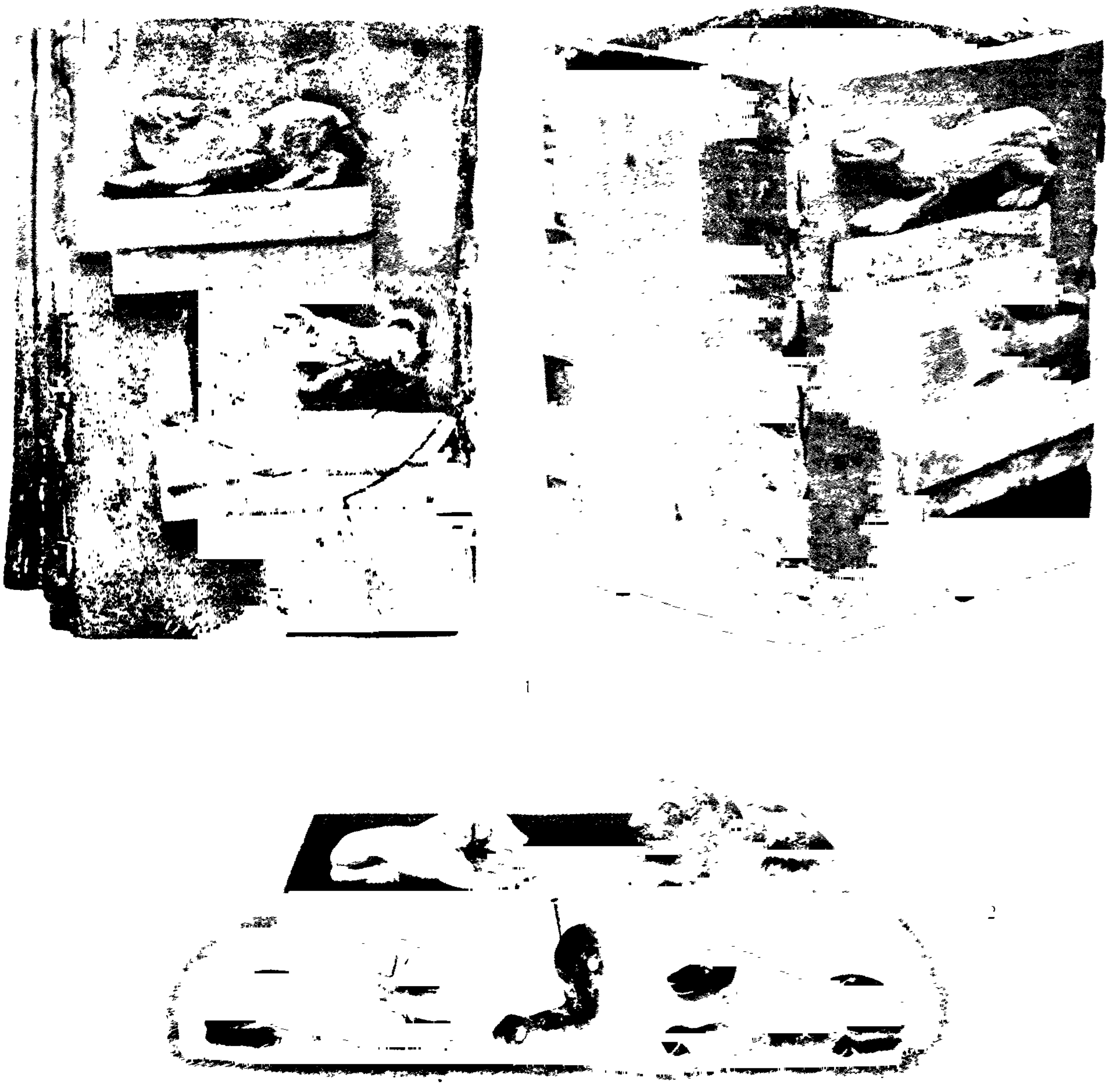


Fig. 131. 1 Wooden box with applique hounds from Shaft Grave V at Mycenae
2 Animals from early Egyptian tombs

to Crete where it would be difficult to find parallels. And secondly SCHWEITZER's study and analysis of the hounds lead to yet another conclusion. He points out on p. 111 that the larger hounds belong to a low heavily-built species with large head and loose hanging ears which is only to be met with three times in Minoan-Mycenaean art: the ordinary species is a tall, slender hunting dog. The small dogs SCHWEITZER classifies as 'Spitze' — in spite of the hanging ears. They cannot be paralleled from Crete but recur on an ornamental gold sheet from the Third Shaft Grave[1]. In Egypt this type of dog is well known from the most ancient times. Even the larger type is met with there in practically identical form in both wood and ivory in graves as early as the 1st Dynasty (Fig. 131: 2)[2].

SCHWEITZER states in connection with the dog reliefs on the wooden box p. 110: "Eine ähnliche naive Ungebundenheit und robuste Härte des Reliefs hat Kreta, wie uns die Glyptik lehrt, nur in der beginnenden mittelminoischen Epoche, Jahrhunderte früher, gekannt." All parallels are also lacking from the Shaft Grave Period on the Mainland; SCHWEITZER maintains that the figural style had already reached "ein weit kräftigeres Durchgreifen einer die rohen Einzelformen organisierenden Reliefanschauung" at this period. He concludes regarding the dogs: "Die sorglose Technik ist beheimatet in einem Gesamtstil, der uns, so sehr er auch mit fremden Elementen schaltet, als überraschend deutliche Offenbarung festländischen Kunstwollens gelten darf. Das Kästchen hat uns den typologisch frühesten mykenischen Reliefstil aufbewahrt." To insert Crete under these circumstances as the connecting link between Egypt and Mycenae appears to me to be quite incorrect.

Since the wooden box is made of sycamore (cf. SCHWEITZER, p. 107), since the joining together of the sides through grooving and mortise and tennon joints is the same technique employed in Egypt and since the technique of working in wood and ivory is similarly at home in Egypt it does not seem improbable that the box is to be regarded as an Egyptian import, though it may even date back to the Early Dynastic period. I may draw attention once again to the bowl of hornblend porphyry dating to the 1st or 2nd Dynasty found in Chamber tomb No. 2 at Asine. It is perhaps possible in this way to explain "die grünlich-braune Spränkelung" which occurs on part of the ivory base as well as the comparatively good state of the whole wooden box which is such a notable feature.

The amazing similarity which the dog figures reveal with those cited from Egypt immediately suggests, that not only the motive as SCHWEITZER correctly demonstrates, but also at least the small curved, applied figures are of Egyptian origin. However, in order to reach a more conclusive opinion upon the subject it is necessary to study the object in greater detail.

Parenthetically we may here note that Shaft Graves IV and V together with No. II are dated, as is well known, to the beginning of the Mycenaean period — Grave VI is somewhat older, Graves I and III slightly younger. That the contents of these graves also bear witness to intimate relations between Crete and Mycenae need not concern us here.

From Shaft Grave IV come two, though unfortunately only fragmentarily preserved, silver vases of which the better preserved may be dealt with more fully in this connection.

---

[1] Cf. KARO, *Schachtgräber*, Taf. XXVI, 41.

[2] Cf. PETRIE, *The Royal Tombs of the Earliest Dynasties* II, pl. XXXIV, 22; v. BISSING, *Einführung in die Geschichte der ägyptischen Kunst*, Taf. XXX, 2.

[3] Cf. *Asine*, p. 377; PENDLEBURY, *Aegyptiaca*, p. 64. Concerning similar secondary use of older objects in Egypt cf. SÄVE-SÖDERBERGH, *Ägypten und Nubien*, p. 108.

Stais' reconstruction of it as a conical shaped rhyton is undoubtedly correct, even though it should have straight or vertical sides as in the case of the well known steatite rhyton from Hagia Triada [1]. The main subject chosen for representation is an attack upon a fortification adjacent to water as is shown by the scale pattern on the lower part of the vase. The decoration is undoubtedly to be interpreted as a single representation, a section of the coast or shore appearing at the tip of the cone.

A fortress appears to the right on the largest fragment, apparently situated upon a hill (Fig. 132). Here, however, a particular perspective must be taken into consideration, the characteristic bird's eye perspective found in Minoan-Mycenaean art which always presents the ground surface as seen from directly above with all the objects on this level surface as seen from the side, in profile against a free and smooth background. The method of depicting a precipitous and mountainous terrain is revealed on the Vaphio cups where all the figures are placed against a plain field, the background or terrain being depicted above and below; cf. also the octopus cup from Dendra.

The fortress is experiencing a hostile attack. The defending warriors appear in front of the walls, slingers and bowmen, all naked, while furthest to the right may be seen two warriors armed with spears and large rectangular shields, misinterpreted as tunics or mantles [2].

From the fortress walls women watch the course of the battle with tense interest, men also appearing among them. At the very bottom appears the upper half of a man in a tunic with short arms and a boars' tusks helmet. He holds a long pole obliquely downwards as if punting a boat to the left. Four helmets on this side probably belong to warriors in the boat — part of the attacking force. The dress clearly shows that we are dealing here with Mycenaean and not Cretan warriors.

The fortress evidently consists of an outer relatively low encircling wall built of regularly spaced four-sided bricks — the ashlar technique is not met with at this period in Greece. Inside the walls stands the main building — a tower-like structure with projecting walls. It is entered by a large gateway barracaded by means of vertical timber baulks. The fortress cannot have been situated on Crete, where fortified towns are unknown, nor in Greece where fortifications such as those of older Tiryns had quite another appearance and form. Comparisons have long been made with fortified towns and cities in Asia and the conclusion reached that we should see in this battle scene an episode similar to that which was the basis for the Homeric story of the siege of Troy. The walls of Troy, however, had a quite different structure and appearance and even if the fortifications had been of this type other comparisons could be made throughout the near East. We have for instance, as Eduard Meyer has pointed out [3], to suppose precisely the same type of fortification at Avaris which was originally the capital of the Asiatic Hyksos people in the east Nile Delta.

[1] Cf. Evans, *Palace of Minos*, III, p. 91, Fig. 50.
[2] Cf. Evans, *Palace of Minos*, III, p. 91 f., Fig. 53.
[3] Cf. Eduard Meyer, *Geschichte des Altertums*, II 1², p. 87.

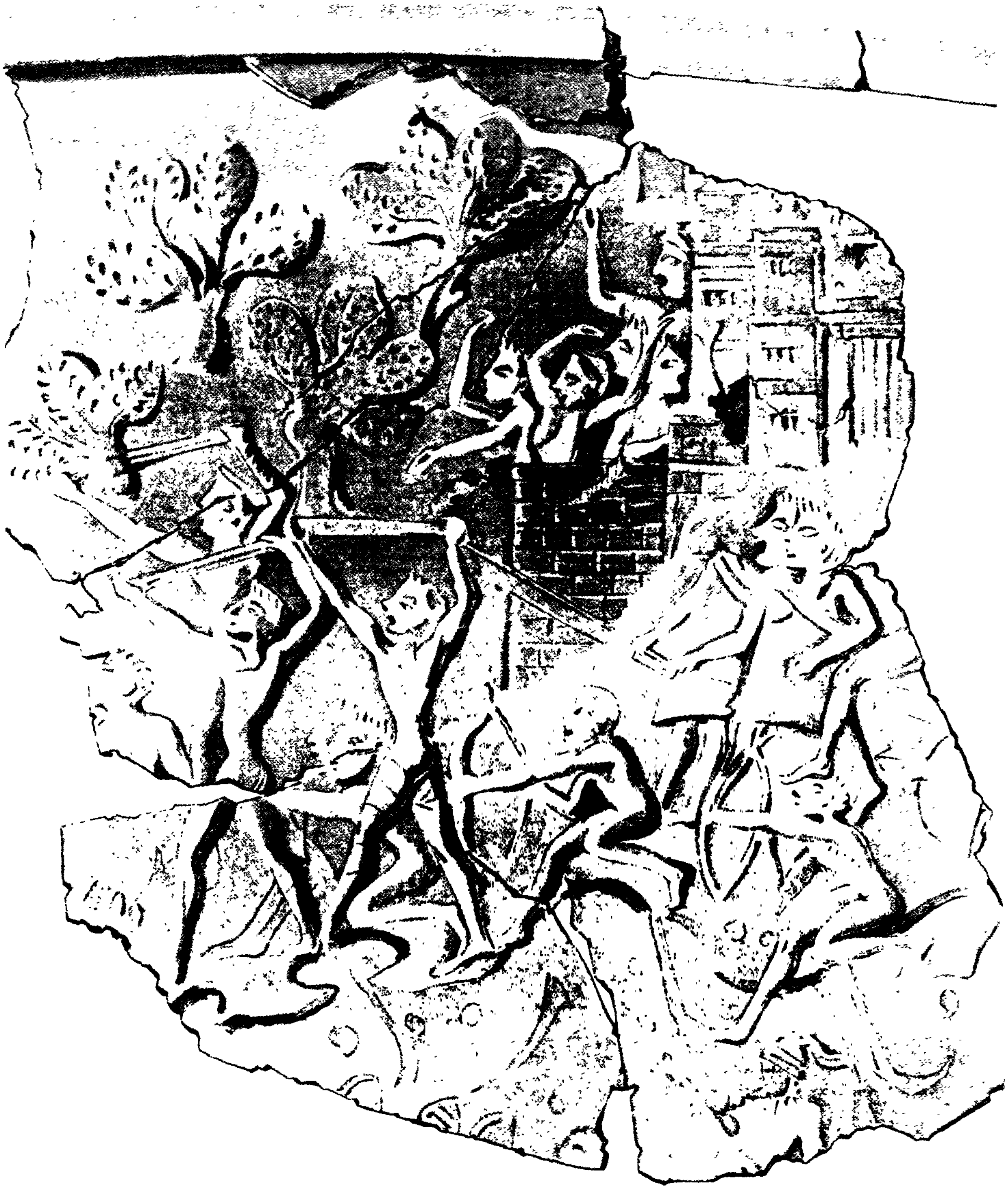


Fig 132. Fragment of silver rhyton from Shaft Grave V at Mycenae

Attention has already been drawn to the typical equipment of the attackers with short armed chiton and boars' tusks helmets. A greater variety is to be observed in the defenders' equipment. Firstly, there are the slingers. EVANS has wished to demonstrate that slings are typical Asiatic weapons [1], but already during the Middle Kingdom Period slingers played an equally important rôle in the Egyptian army [2]. Concerning the bowmen — views have been influenced by the importance of the Carian bowmen in later times — it may be said that they formed the very core of the Egyptian army; the Egyptian word for "warrior", *pd.t*, actually significes "bowman". The central bowman on the fragment is using the typical, so-called Asiatic horn-bow, but this too is met with in Egypt before the beginning of the New Kingdom. Soldiers armed with spears and slightly curved rectangular shields, about a metre high, are also known during the Middle Kingdom Period, e.g. in the representations from Beni Hasan.

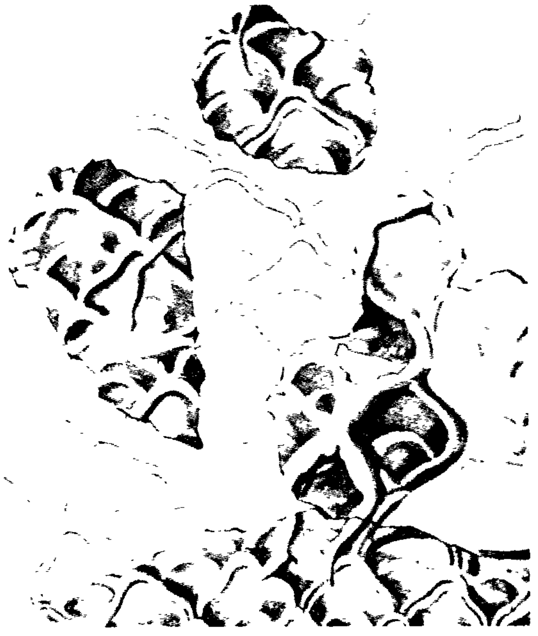


Fig. 133. Fragments of silver vase from Shaft Grave V at Mycenae

A section, unfortunately badly damaged, is of perticular interest depicting several naked frog-like figures, swimming with a kind of breast stroke or as in the case of the man furthest to the left with a crawl stroke in the Egyptian style (Fig. 133). Parallels of the swimming figures exist on the dagger blade from Vapheio, first published by MARINATOS and later dealt with by EVANS [3]. The most interesting figure, however, on the vase from Mycenae is the "dog-headed monster", according to EVANS [4], furthest to the left. Unfortunately only a portion of the head is preserved. For my part I am inclined to believe that we have here a motif common in Egypt, namely the hippopotamus which has attacked a boat and capsized it, compelling the crew to swim to the shore. Hunting scenes already occur in the Old Kingdom Period depicting the hippopotamus attacking Nilotic boats [5]. I am also inclined to interpret in the same way the famous representation found on a seal impression in Crete which shows a sea monster and a boat (Fig. 134: 1) [6]. That hippopotamus played a certain rôle in the Aegean cultural sphere is proved by the representations we have from gems of the hippopotamus goddess, Tueris, including the bead-seal from Phaestos, dated by EVANS to Late Minoan I *a*, where she is depicted either carrying or perhaps carving a suspended calf (Fig. 134: 2); the Egyptian parallels (Fig. 134: 3—4) are taken over from EVANS [1].

---

[1] Cf. EVANS, *Palace of Minos*, III, p. 99

[2] Cf. ERMAN-RANKE, *Aegypten*, p. 627

[3] Cf. MARINATOS *The 'Swimmers' dagger from the Tholos Tomb at Vaphio*, in *Essays in Aegean Archaeology presented to Sir Arthur Evans*, Oxford 1927, p. 63 ff. EVANS *Palace of Minos* III, p. 127 ff.

[4] Cf. EVANS, *o. c.* III, p. 96

[5] Cf. ERMAN-RANKE, *Aegypten*, p. 271

[6] Cf. EVANS, *Palace of Minos*, IV, p. 952, Fig. 921 — Note, the neck is not tall, the impression is damadged to the left.

The four trees seen in the meadow in front of the fortress have generally been identified as olive trees. That the olive was successfully cultivated in Egypt appears for example from Papyrus Harris I, 8, 5 where it is stated: "The two lands (both Upper and Lower Egypt) abound with olive groves bearing fruit plantations with great trees and the oil is richer than the sand of the sea [2]".

I am therefore inclined to place the dramatic incident portrayed in this representation on the silver rhyton in Egypt. In spite of the fact that the incident contains a motif which already appears in early Egyptian art the picture cannot be classified in the conventional genre of besieging scenes. It seems more probable to me that we are concerned here with an account of several related episodes which must be traced back to an eye witness' account or to a description contained in some detailed epic story. Apart from the dramatic episodes such as the besieging scene itself with the women upon the walls, anxiously following the course of battle, and the capsized boat with the monster among the swimmers, both geographical and ethnological details are clearly recorded: on one side the fields with olive trees and the fortress, on the other the sea; on one side the naked and half naked warriors, on the other men with typical Mycenaean equipment and weapons. All this, it seems to me, would indicate that the representation is an historical document, comparable to the scenes reproduced in the illustrated papers of our own day.

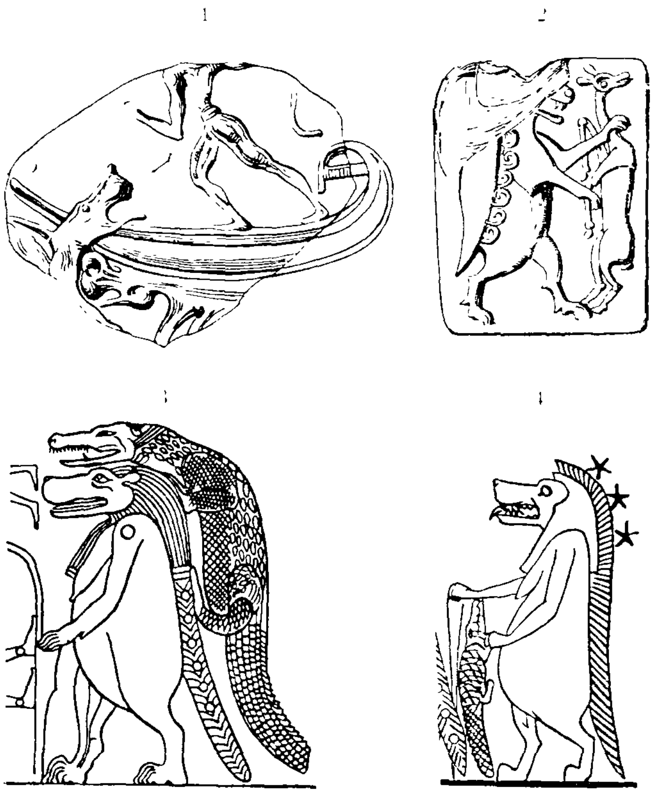


Fig. 134. 1) Seal-impression from Knossos
2) Bead-seal from Phaestos
3—4) Egyptian representations of the hippopotamus goddess

With reference to the type of fortification complex this is also familiar from numerous parallels in Egypt dating to the Middle Kingdom Period. The greatest part of the large Middle Kingdom fortress built at Kuban in Nubia still remains and it has been possible to reconstruct the whole on paper [3]. SÄVE-SÖDERBERGH has also specially dealt with such fortresses [4]; a low retaining ring wall with a high central building is characteristic of this type. Though primarily found in Nubia they also certainly occurred at a weak point in the east Nile delta where a gap in the chain of salt lakes is made by the long valley of the ancient Gosen, the present Wadi Tumilât extending to the very heart of the Delta. Already during the Middle Kingdom, if not earlier, a large fortification was built here, the "wall of the ruler, for defence against the Asiatic peoples" [1].

---

[1] Cf. EVANS, *Palace of Minos*, IV, p. 434 f., Figs 358 a, 356.

[2] Cf. ERMAN-RANKE, *Aegypten*, p. 226.

[3] Cf. EMERY-KIRWAN, *The Excavations and Survey between Wadi Es-Sebua and Adindan 1929—1931*. Cairo 1935.

[4] Cf. SÄVE-SÖDERBERGH, *Ägypten und Nubien*, p. 94 ff.

Unfortunately little is known of Avaris. Even its exact site is uncertain though it is known to have been situated in the eastern Delta not far from Pelusion; one is inclined to think of Tanis. On an inscription from El-Kâb dating to the reign of Amosis which refers to the battles fought for this town it is described as being in close proximity to the water.

The main motif, a besieged town, is wholly lacking in Minoan art but often occurs in Egyptian. Similar scenes repeatedly appear in Middle Kingdom graves at Beni Hasan (Fig. 135: 1—2) [2]. Even if the fortresses portrayed here are of another type, many of the figures are reminiscent not only with regard to the weapons and equipment, but also in their postures to the defenders on the silver vase. As EVANS has correctly pointed out, a definite scheme was early established in the siege scenes found in Egyptian art [3]. Particular attention must be paid to the figures leaning over the fortress walls on the representations from Beni Hasan, on our silver vase, as well as in the besieging scene from the Ramesseum which shows Ramesses II besieging Tabor in 1295 B.C. (Fig. 136) — the latter being almost two hundred years younger than the representation on our silver vase from Mycenae. The Ramesseum scene is also of the greatest interest in another connection, with warriors depicted falling from the walls, revealing a close similarity to scenes on the frieze in the Megaron at Mycenae (Fig. 137) [4]. It would seem that we have here, too, a familiar Egyptian motif just as we had that of the hippopotamus capsizing a boat.

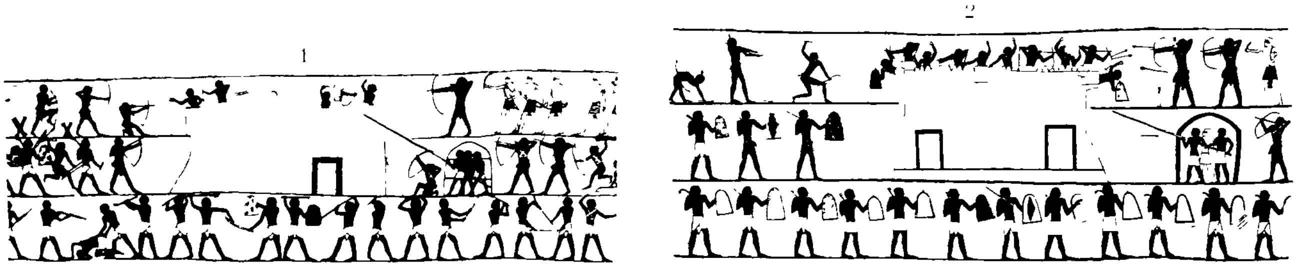


Fig. 135. Egyptian siege scenes from the tombs at Beni Hasan

Objects therefore occur among the contents of Shaft Graves IV and V which definitely point to connections with Egypt: the Nile dagger, the wooden chest with the applique hounds and, according to my interpretation, the silver rhyton. Above these shaft graves occurred the famous stelae with the oldest representations of the horse and chariot known from European soil. I was earlier inclined to interpret these as evidence that the Achaeans followed a land route upon their entry into Greece [1], but I am no longer so certain of this interpretation.

---

[1] Cf. ERMAN-RANKE, *Aegypten*, p. 627 f.

[2] Cf. NEWBERRY, *Beni Hasan* II, pl. V, tomb 15, pl. XV, tomb 17, I, pl. XIV, tomb 2.

[3] Cf. EVANS, *Palace of Minos*, III, p. 101 ff.

[4] Cf. RODENWALDT, *Der Fries des Megarons von Mykenai*, Beil. II.

According to the generally accepted view the horse was introduced into Egypt under the Hyksos. Is it not more probable to believe therefore that the warrior princes buried in the Mycenaean Shaft Graves first learnt the use of the horse and chariot in Egypt, and that it was there that they first saw the models for the representations on the grave stones? A remarkable similarity actually exists in the composition style and form between these equestrian representations and the oldest found in Egypt: the horse with forelegs lifted high, prancing like an elegant rocking horse, with the tails elegantly arched, with the proud, victorious warrior in his chariot and his adversary — apparently naked after the Egyptian fashion — placed either in front of the equipage or prostrate beneath the hooves of the advancing horses. The closest Egyptian parallels occur on a scarab with Thutmosis Ist's cartouche and on another scarab found at Kalauria dated by PENDLEBURY to the early 18th Dynasty (Fig. 138: 1—2) [2]. The same motive later occurs on numerous occasions in Egyptian art, for example on Tutankhamens famous clothes chest, on the temple walls at Medinet Habu and so on.

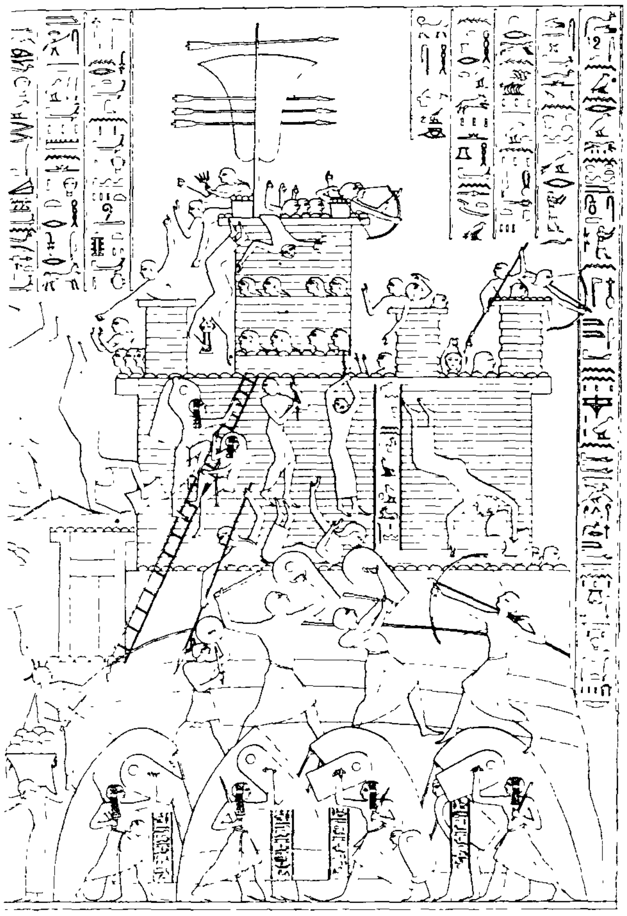


Fig 136 Egyptian siege scene from the Ramesseum

An additional feature must be pointed out in connection with the stelae form Mycenae. As is well known, monumental sculpture in stone is entirely unknown in Cretan art — the larger figures are always executed in painted stucco relief. The Shaft Grave stelae with their plain relief are entirely unrelated and, indeed, embody a motif which as already stated can be identified in exactly the same form in Egypt. Even the technique points in the same direction — low stone relief is of great antiquity in Egypt — and the rectangular form of the stelae also finds parallels.

The famous gold ring with the deer hunting scene was also found in Shaft Grave IV [3]. The hunter and charioteer stand in the chariot which is drawn to the left by two horses in the "flying gallop". A deer, which turns its head towards its pursuers, appears in the field above the horses. A rocky terrain is indicated along both the lower and upper rims of the representation. The limitations of space, determined by the size of the seal, has influenced the composition: the peculiar elongated portrayal of the horses and the deer placed above and not in front of the horses is obviously due to the elliptical shape of the seal. WRESZINSKI has dealt with the motif "Der Herr auf seinem Wagen"[1] and related material from the whole of the East Mediterranean area. He traces the hunting motives to a common origin, placing rather doubtfully a Mitannic seal first in the sequence. Though the appearance of the horse and the chariot in Egypt from the North East does not conflict with such an interpretation there is nothing to refute the belief that Mycenae first learned of this motif from Egypt. This is further confirmed by the fact that the wheel of the Mycenaean chariots has 4 spokes, just as that of the Egyptian, while the Oriental wheel has 6 or 8 spokes.

---

[1] Cf *Asine*, p 434

[2] Cf PENDLEBURY, *Aegyptiaca*, p. 67 According to information given by Prof L KJELLBERG the scarab was stolen shortly after its discovery

[3] Cf KARO, *Schachtgräber*. Taf XXIV, no 240, Text p. 73 f

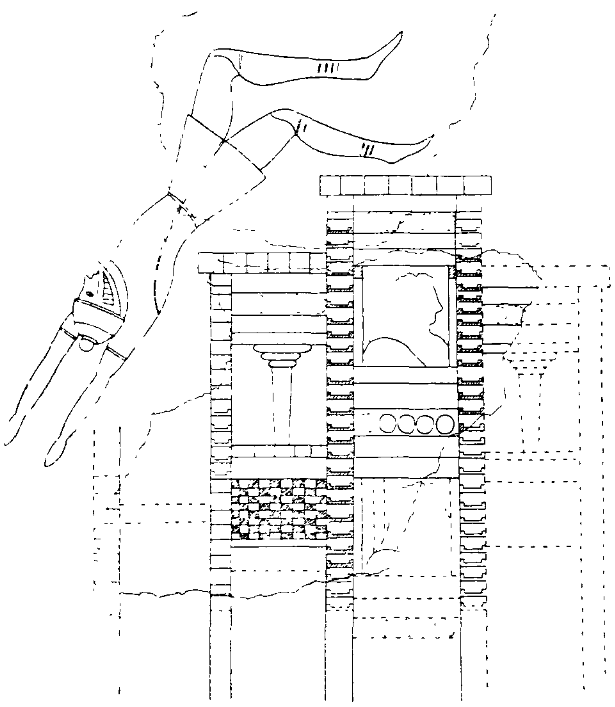


Fig. 157. From the frieze in the Megaron at Mycenae

Attention may be drawn to one of the swords found in Shaft Grave V which bears on the blade a row of horses in flying gallop, gradually diminishing in size towards the point[2]. These horses are apparently of another species, more like wild horses, than those of the previous representations with the horse harnessed to the chariot. It is quite possible that the appearence of the horse on Greek soil is to be paralleled with the facts known from China where a small wild horse was well known hundreds of years before the higher domesticated horse was introduced with the chariot. The horses on our sword from Mycenae are depicted in the flying gallop scheme, a constantly recurrent motif applied to different animals such as the lion, the griffin and many others in Mycenaean representations. The two sealstones with the motif "Der Herr auf seinem Wagen" from Vaphio and Knossos, where the horses are represented as walking, are both younger.

Fig. 158. 1. Egyptian scarab with Thutmosis Ist's cartouche. 2. Scarab from the early 18th Dynasty, found at Kalauria

As still another indication of the connection between the Mainland and Egypt I wish to refer to my interpretation of the lion as the heraldic animal of the Mycenaean prince[3].

---

[1] Cf. WRESZINSKI, *Löwenjagd im alten Aegypten*, in *Morgenland*, H. 23.

[2] Cf. KARO, Schachtgräber, Taf. LXXXVI, no. 748.

[3] Cf. *Royal Tombs*, p. 125 and *Dragma*, p. 380 ff.

I have attempted to prove that in Greece the heraldic animal is of Oriental origin and I have also pointed to the parallelism which exists in this respect between the world of Mycenaean civilization and that of Egypt. In this connection I only wish to add that before the cartouche of King Kamose, Amosis' predecessor, on the golden funeral boat found in his tomb a lion is represented instead of the customary title. I have already stated that on Amosis' ceremonial dagger a lion occurs after his cartouche pursuing a bull. Immediately below the representation of a warrior in his chariot riding over his recumbent foe on one of the shaft grave stelae from Shaft Grave V at Mycenae a lion is shown pursuing an animal — it is suggested a deer. I interpret this representation as a pure pictograph, in translation: "the prince pursues his enemy as the lion his prey", and I have compared the representation to the well-known Homeric similes and metaphors. The above mentioned examples from Egypt show that the Mycenaean princes were certainly indebted in this to their Egyptian colleagues.

As a further illustration of this relationship I would refer to a stela found in the temple of Amon at Karnak, now in the Museum in Cairo. It preserves for us a poem glorifying the victories of Thutmosis III. The king is represented worshipping Ammon, and, after a long introduction glorifying Thutmosis, his god Ammon says to him:

"I have come, giving thee to smite the western land; Keftyew and Cyprus [1] are in terror; I have made them see thy majesty as a young bull, firm of heart, ready-horned and irresistible.

I have come, giving thee to smite those who are in their isles, those who are in the midst of the great sea hear thy roarings; I have made them see thy majesty as an avenger, rising upon the back of his slain victim.

I have come, giving thee to smite the Libyans, the isles of the Utentyew belong to the might of thy prowess; I have made them see thy majesty as a fierce-eyed lion, while thou makest them corpses in their valleys" [2].

The egyptologist, Professor GEORGE FOUCART makes the following observation to this passage: "Les comparaisons du roi avec le taureau, le lion, l'épervier ne doivent pas être prises pour de simples ornements poétiques; elles traduisent en prose rythmée les formes traditionelles par lesquelles l'iconographie figurait le Pharaon vainqueur des peuples ennemis et continuant l'oeuvre des dieux amis et organisateurs du monde égyptien. Ces dieux belliqueux sont censés s'incarner dans le lion dévorant, le taureau qui foule l'ennemi de ses sabots, l'épervier qui fond sur sa proie. Le roi, qui est leur fils et leur héritier, est représenté sous les mêmes formes animales. Celles-ci apparaissent sur les monuments les plus anciens de la période thinite, fournissent des thèmes aux temples funéraires memphites et se continuent sans interruption jusqu'aux dernières dynasties nationales, par exemple, dans les statues votives de Saft el Henneh. Lorsqu'on en fait usage pour un règne et pour des peuples nommément désignés, les comparaisons de cette nature servent à marquer que le Pharaon ainsi célébré avait effectivement accompli la tâche dévolue au successeur des dieux"[1].

---

[1] This identification is disputed

[2] Translation after BREASTED, *Ancient Records of Egypt. The historical documents*, II, p. 261.

That the lion was the heraldic animal of the Mycenaean prince, is evident from the lion relief above the entrance to his castle; that he identified himself with the lion, is evident from the fact, to select only one, that, according to Homer, he wore the lion's skin as a royal robe. That the ideas underlying these usages had their conception in Egypt, seems wholly obvious to me in view of the evidence of the lines here quoted. For further evidence I refer to my paper in *Dragma*, referred to above.

That Mycenaean thought and conceptions must have received such influences is shown most clearly by documents relating to pre-Greek religion. The most remarkable documents we possess of the religious concepts which held away in the Aegean world are the scenes depicted upon the gold rings. These scenes are undoubtedly copied from frescoes, modified to suit the elliptical shape of the signet rings. They form a series of illustrations drawn from the religion of the age — to be compared perhaps with the altar pieces of the present day. One of the most remarkable gold rings, which probably comes from the famous Vaphio Tomb, depicts a human figure in the form of a mourning woman bowing over a large storage vessel, a pithos — similar to those used at this period as funeral jars or urns (Fig. 139: 1). After an analysis of other and similar gold rings with religious motifs I have interpreted this scene as an allusion to the death of vegetation. Attention should be paid to the leafless tree or bush at the side of the stone behind the jar. A large ear and eye are depicted in the space above the mourning woman, behind her a female figure and a smaller male figure, symbolizing the epiphany of the divine powers represented aniconicaly in the tree and the stone. The ear and the eye have never been interpreted: NILSSON, *Minoan—Mycenaean Religion*, p. 276, endows them with an amuletic character, and EVANS, *Palace of Minos* II, p. 842, merely states that the representation "is not easy to explain". Their true nature, however, becomes clear immediately we turn to analogous Egyptian material. Innumerable reliefs from Egypt show the ear in close proximity to a God, in the case for example of Ptah, before whom a suppliant is depicted, the whole accompanied by the text "Ptah hears your prayer" (Fig. 139: 2). Similarly, the eye is shown where gifts are represented before the god (Fig. 139: 3). Actually these details must represent an elementary pictograph or script, the ear and eye signifying that the gods or divine powers have heard man's prayers and seen his offerings or sorrows. Analogous representations of the ear and eye also occur on other gold rings which can easily be interpreted if their symbolic significance is understood. Space however does not permit of a closer study of this problem here. I have, however, dealt with this question at greater length in my *Sather Lectures, The Religion of Greece in prehistoric Times.* Other purely Egyptian motives are to be found which play a certain rôle in the Mycenaean culture as for example the Hathor cow with the sucking calf often met with on Mycenaean seal stones mainly from the oldest period.

Under such circumstances it is only natural that sepulchral architecture and funeral cermonies in the Aegean area should have been influenced from the same source, particularly in view of the fact that the cult of the dead was the most dominant feature in Egyptian religion. I am therefore of the opinion that we are completely justified in reckoning with direct Egyptian influence on the Mainland as regards the origin of the Mycenaean chamber tombs, without Crete as an intermediary.

---

[1] In P. FOUCART'S *Les Mystères d'Eleusis*, p. 5, note 2

Not only material but also spiritual values must have been directly transmitted or interchanged to an extent which has hitherto hardly been conceived as possible. We have had repeated occasions above to indicate points of contact where Crete fails us, as for example with regard to the form of burial, the wooden coffin, cf. above p. 111 ff., the gold masks etc. in the shaft graves, cf. above p. 118, the grooves for skid poles, cf. above p. 156, the idea of Hades in the west, cf. above p. 152 f., etc.

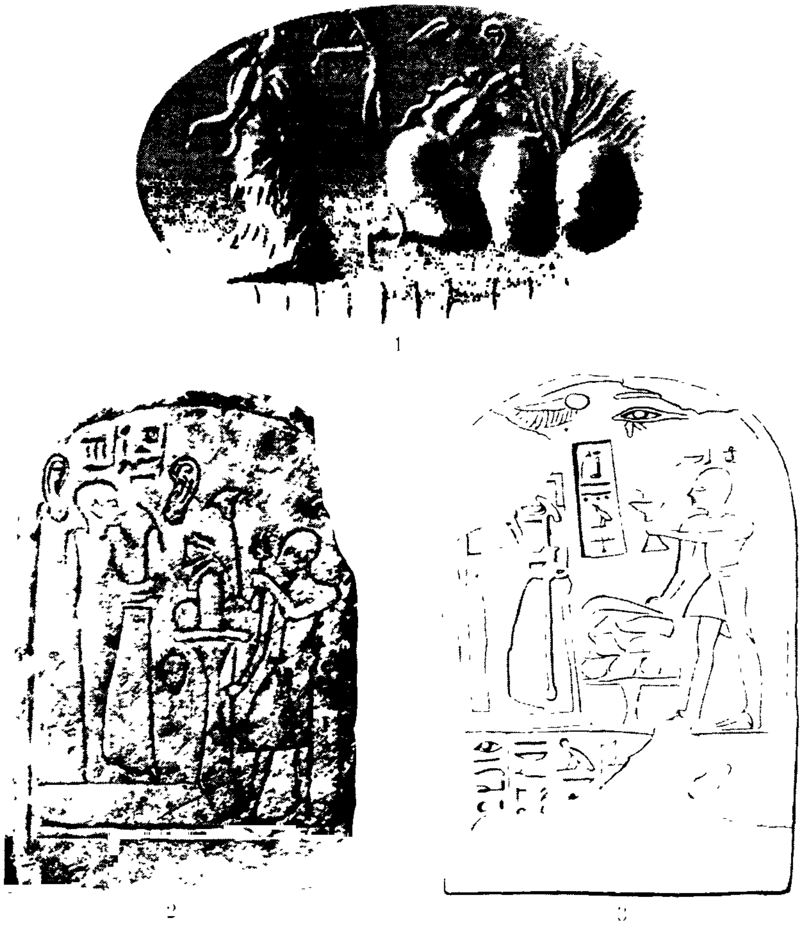


Fig 139 1 Cast of a mycenaean gold ring in the Ashmolean Museum, Oxford
2 Egyptian stela from Memphis (PETRIE, *Memphis* I, pl XI, 15).
3 Egyptian stela from Memphis (PETRIE, *Memphis* I, pl XIV, 33)

Even if one were to doubt, from the point of view of convergence or independent origin, the connection in one instance or another, the whole body of evidence together is so large and provides so many identical aspects that it is impossible to dismiss the connections between Mycenae and Egypt during the early phases of the Mycenaean Age.

It is only natural that if such connections actually existed they must have left traces in the Egyptian historical sources. As is well known numerous references are made to the "Peoples who dwell in the North" but the exact location of these in geographical terms is more difficult to obtain, and the names for these foreign peoples have been interpreted in different ways. Any closer identification can only be obtained by a comparison of the literary and archaeological material available.

The inscriptions in which reference is made to 'Haunebt' are of particular interest. The word itself perhaps signifies 'Those who dwell on the other side'. In late inscriptions dating from the centuries immediately preceding the birth of Christ 'Haunebt' is quite definitely applied to Greece. In the last lines of a multilingual decree from Kanopos [1] it is stated in the Egyptian version that the decree shall be inscribed in the hieroglyphic script, in the Demotic script, and in Haunebt's script. The later is given in the Demotic version as the 'Ionians' script' and in the Greek as *ἑλληνικοῖς γράμμασιν*. As the name has certainly not an ethnical but an indeterminate geographical significance the sources must be examined to see to what extent it may be interpreted with reference to Greece. EDUARD MEYER [2] has interpreted the name, in most cases, as a special allusion to Crete, but his conclusions have not wholly been accepted by egyptologists.

Amosis conquered the Hyksos capital, Avaris. How he accomplished this is as yet unknown to us. Our knowledge of the final struggle is limited to a biography of one of the participant naval officers, Ahmose, son of Ebana [3]. As EDUARD MEYER has pointed out from Manethos' account, it appears that the Hyksos were given free passage but the Pharaoh pursued the enemy to Asia and overthrew the fortress of Sharuhan in the extreme south of Palestine after a three years siege.

That Haunebt actually played a part in the expulsion of the Hyksos is credited by MEYER from one of Amosis' inscriptions [4] in which he counts the rich gifts he gave to Ammon in Thebes. This is prefaced by a hymn to the Pharaoh, Amon's son and heir, in the conventional style: "King of Kings in all the lands, who rules the whole circle of the sun, to whom come the peoples of the South, North and West." In one section, where he demands honour and respect for his mother, the queen Aah-hotep, it is said of her: "Ruler of the land (Egypt), princess of Haunebt's shores."

EDUARD MEYER points out that we are evidently here concerned with a question of political significance and that we must regard the Queen-Mother as the founder of the new Egypt. Through her influence and activities beyond the boundaries of Egypt it was possible to form a coalition which compelled the Hyksos to withdraw. The phrase 'Princess of Haunebt's shores' bears witness of contacts with the people of the north and it is only natural to suppose that a combined attack against Lower Egypt where the Hyksos had their stronghold, Avaris on the Nile Delta, must have implied an alliance between Upper Egypt in Thebes and the peoples of the Aegean. Because of their participation it was possible to encircle and conquer Avaris. The archaeological material appears to show, however, that EDUARD MEYER can hardly have been correct when he confined the phrase 'Haunebt's shores' to the coasts of Crete. The material, as we have seen, points more directly to the Greek Mainland and I am inclined to give this phrase a wider designation — applying to the coasts of the Aegean Sea.

---

[1] Cf. *Urkunden des ägyptischen Altertums*, II, 154 and 197, cf. also BOSSERT, *Altkreta*³, p. 53, v. GRAPOW's translation

[2] Cf. E. MEYER, *Geschichte des Altertums* II 1² p. 52 ff.

[3] Cf. BREASTED, *A History of Egypt*², p. 226

[4] Cf. Amosis' stela from Karnak, SETHE, *Urkunden*, 14 ff.

In the hymn to Amosis himself it is said: "The Egyptians say: 'Our Lord is he.' Haunebt say: 'We are with him'. The Lands say: 'We belong to him'." EDUARD MEYER has correctly pointed out that we are here evidently dealing with three groups: the Egyptians, the allied people in the North who bring help, and the rest of the world — Syria and the Nubian lands — over which he had extended his power.

From this intimate association between Egypt and the Aegean world deep influences developed which affected the culture and art of the two lands, giving and receiving, culminating in the immediately succeeding period.

On a rock inscription from Tombos at the third cataract dating from the second year of Thutmosis I:s reign and commemorating his Nubian campaign (circa 1545 B.C.) it is stated: [1] "The King established himself upon the throne in order to extend the boundaries of the city of Thebes . . . to make subservient to Thebes the sand dwellers, the barbarians abhorred by God, the Haunebt (further an unknown people). The Southern peoples come north, the Northern peoples south, all lands come with their gifts to the King." In an inscription from the first year of Thutmosis II:s reign (circa 1510, B.C.) it is stated [2]: "His Majesty was in his palace. His fame was great. Fear of him existed in the land. He commanded respect in the land of Haunebt. Egypt was under his control" etc. Of Thutmosis III (1504—1450 B.C.) it is said in an inscription from the Temple of Amon at Thebes [3]: "Thou, King, lead the low countries. The mountain lands serve thee. Thou rulest the land of Haunebt."

It is certainly correct to suppose that Haunebt was occasionally included under the name of the 'Island peoples'. In the inscription dating to 1545 B.C. in Thutmosis I:s reign mentioned above it is also stated that: "The isles in the sea serve the King. The whole earth lies under his feet." And on the memorial stone which describes the power of Thutmosis III Ammon says to the king: "I have come, giving thee to smite those who are in their isles, those who are in the midst of the great sea hear thy roarings." [4]

It is essential to remember the conventional style in which the Egyptians commemorated their victorious campaigns and couched the records found on the monuments. Thus, we must not be led to believe that the lands mentioned were actually conquered by Egypt and similarly we must be careful not to attribute a modern signification to the word "tribute" as already emphasized, cf. above p. 145. If the numerous raw products such as gold, ivory, half-precious stones, ostrich eggs etc. which were imported into the Aegean culture area are considered they provide a sufficient explanation of the complementary export of ready-made Minoan-Mycenaean products so clearly represented in many Egyptian tomb scenes, such as that in Rekhmire's tomb dating to Thutmosis III:s reign or that in Senmut's tomb c:a 1480 B.C.[1].

---

[1] Cf. *Urkunden der ägyptischen Altertumer* IV, 83, BOSSERT, *Alt-Kreta*^{3}, p 52.

[2] Cf. *Urkunden der ägyptischen Altertumer*, IV, 138, BOSSERT, *Alt-Kreta*^{3}, p 53.

[3] *Urkunden der ägyptischen Altertumer*, IV, 572, BOSSERT, *Alt-Kreta*^{3}, p 53.

[4] *Urkunden der ägyptischen Altertümer*, IV, 615; BOSSERT, *Alt-Kreta*^{3}, p 54; BREASTED, *Ancient Records*, II, p 264

Even if these concern a somewhat later period the well-known fact may be referred to that the numerous vase fragments found at El Amarna, Akhenaten's city, are of unmistakable Aegean origin belonging to the Late Mycenaean Period's first phase and Pendlebury expressly states that "the Amarna sherds are the result of connections between Akhenaten and the Mainland, not Crete"[2].

Good reasons are given by Eduard Meyer[3] for believing that these connections between Egypt and the Aegean originated upon Egyptian initiative in the enlisting of foreign mercenaries. Säve-Söderbergh has clearly demonstrated the rôle played by Nubian legionaries at an earlier period and particularly their part in the expulsion of the Hyksos from Egypt[4]. If we come down to the time of Ramesses II we see how he employed the Sherden, already mentioned in the El Amarna letters, as garrison troops in Syria. Their arms and equipment clearly show that they came from the Aegean area. It therefore appears more than probable that Amosis employed the people of the North in the struggle against the Hyksos — just as Psamtik about a thousand years later threw off the Assyrian yoke with the aid of Ionian and Carian legionaries. During the immediately succeeding centuries Egypt was the very hub of the Ancient World and must have executed considerable influence upon the Aegean area. Control over the Nubian gold endowed the realm with considerable power and contributed to the high place of honour occupied by the Pharaoh among the contemporary princes, also providing a never failing source of power in diplomatic relations.

The archaeological material therefore bears witness to connections between Mycenae and Egypt about the middle of the second millenum B.C. and the literary evidence from Egypt points in the same direction, because we have reason to apply such names as Haunebt, 'the peoples dwelling on the other side', 'the peoples in the North', and 'the Island peoples' to the peoples of the Aegean coasts. Do any Greek traditions exist upon this subject?

It has long been known that the Argive saga cycle contains many references to Egypt. No other Greek region, not even Crete, is mentioned so often and in such close relations to Egypt as the Argive area. Space does not permit of detailed study here but certain features may be mentioned. Io from Argos gave birth in Egypt to a son, Epaphos. His daughter, Libye, through the sea god Poseidon gave birth to Agenor, later king in Phoenicia and father of Europa and Belos. Belos had two sons, Aigyptos and Danaos, who quarrelled bitterly. Danaos became king in Argos. Aigyptos had fifty sons and Danaos fifty daughters who desired to end the feud by marriage. But Danaos gave each daughter a dagger and instructed them to kill their husbands upon the wedding night. Only the eldest, Hypermnestra, spared her husband, Lyncheus, since she loved him dearly. As punishment for this crime the Danaidae in the underworld were compelled to fill a bottomless pithos with water carried in leaky pitchers.

---

[1] Cf. Fimmen, *Die kretisch-mykenische Kultur*, p. 182 ff.

[2] Cf. Pendlebury, *Aegyptiaca*, p. 54.

[3] Cf. Eduard Meyer, *Geschichte des Altertums*, II. 1^2 p. 57 f.

[4] Cf. Säve-Soderbergh, *Agypten und Nubien*, p. 139.

The name Danaos immediately suggests the El Amarna letters in which a people, the Danuna, is mentioned among others. During the reigns of Merneptah and Ramesses II the peoples of the sea attacked Egypt, Merneptah defeated the Aqaiwasha and other peoples in the Delta in 1221 B.C. and Ramesses repelled a new invasion including the Danau or Dananna and Pulesata, inflicting upon them a crushing blow in the Nile Delta in 1190 B.C. The Pulesata may be definitely identified with the Philistines.

The name 'Danauna' among the peoples mentioned is of particular interest here, for it can certainly be identified with the *Δαναοί*, used by Homer as appelation for the Greeks considered as a people, but it must have originally signified a tribal element. However, it would appear that the name Danaans was already becoming obsolete in this sense in the time of Homer but the saga's Danaos and Danaë which both belong to the Argive cycle must certainly be regarded as tribal eponyms. We may therefore confidently locate the Danaans as a tribe in Argolis. Similarly from the El Amarna letters it is possible to see how they also established themselves in the coast of Palestine and Phoenicia.

The two brothers between whom a deadly feud existed are called Aigyptos and Danaos in the saga. The meaning of these names is evident: the Egyptian and the Danaan, eponyms for the two peoples. Their fraternal relationship appears at first to be curious. Would a Greek, even if only in a story, really give the name Aigyptos to his son? I believe that the saga's "brotherhood" is not to be explained in terms of blood relationship but in quite a different way. Through the Babylonian and Hittite documents dating to the second millenium B.C. we now know that the title "my brother" was used between rulers, as "*mon cousin*" is used today, as a term to denote equal power when the rulers' kingdoms were of the same importance. The Danaans' king, Danaos, and the Egyptians' king, Aigyptos, were "brothers" of this nature and, as has been shown, the strife which developed between them can be verified historically from Egyptian sources.

If we now combine the archaeological material, the Egyptian historical records and the Argive saga we obtain the following sequence of events. The peoples of Argolis had taken part in the great war of liberation fought by the Egyptians against the Hyksos, most probably as mercenary soldiers. They had certainly not come home empty handed as is shown by the wealth of gold in the Shaft Graves, and the high culture with which they came in contact in Egypt imparted a strong stimulus to the flowering of culture upon Greek soil.

During the immediately succeeding period — during the reigns of Thutmosis I, II, III in Egypt — connections of a similar nature must have existed between Mycenae and Egypt, fostered by a peaceful and prosperous exchange of trade. It is more than probable that many Mainlanders departed from their native land, Argolis, when the time arrived that the coasts of the Aegean succumbed to the power of the Cretan fleet — Minos' thalassocracy. The refugees must have sought a home in other lands — including Egypt — for according to the saga Io was pursued from Argos by a horse fly and after she had roamed round the world she found a place of rest in Egypt. Reference has already been made to the rich finds of Mainland pottery at El Amarna, and strong Mycenaean influence is clearly apparent in the decorations of Akhenaten's palace. Peaceful connections must therefore still have continued after 1400 B.C.

During the period of Mycenaean colonization people from the Aegean area settled on the coasts of Palestine and Phoenicia. Finds from the east Mediterranean region bear witness to a strong penetration of Greek elements, a memory of which is retained in the Io saga — Io's son was the father of Agenor, king in Phoenicia, and in his turn father of Europa.

The political relations between Mycenae and Egypt evidently deteriorated after the end of the El Amarna Period. The Egyptian sources relate of the Danauna's unsuccessful attempt to settle in Egypt. The growth of hostility is reflected again in the saga — Danaos' daughters stab Aigyptos' sons.

It is true that the combinations attempted here must essentially remain hypothetical, but relations of the nature described must be accepted, as is shown by the archaeological material. It may perhaps appear strange in view of these relations that Mycenaean art does not reveal a closer similarity to the Egyptian. It must be remembered, however, that the peoples dwelling on Greek soil in both the 2nd and 1st millenium B.C. were highly gifted artistically. They were not content with a slavish copying of originals but assimilated and adapted them to their own mode of expression. This may be illustrated by one example: the principle of the oldest script in Crete was definitely taken from Egypt, but only the principle, not the signs, which developed independently. In a similar way the later Greek alphabet was taken over from the Phoenicians: the Semitic peoples were restricted to the use of consonantal signs while the Greeks included the vowels.

All these comparisons and connections show, it seems, that the civilization which flowered upon Greek soil in the second millenium B.C. cannot be regarded as a body absolute and complete in itself. We must always be prepared for foreign intrusions and influences and this applies in almost the same degree to Anatolian as well as to Egyptian connections. It is just as impossible to evaluate or to understand the Mycenaean culture as the Hellenistic if we do not give adequate attention to the surrounding world in which it was sown and thrived.

Appendix.

Chemical analyses.

By G. HÄGG.

1. Beads of Egyptian faïence.

AN X-ray examination of one of these beads (powder photogram in focussing camera) revealed only interferences from quartz. A chemical analysis gave, in complete agreement with this, a very high percentage of silica. The result of this analysis is given in the following table:

Loss in weight at 110°	0.17 %
Loss of weight after ignition	0.55
Silica, SiO_2	95.68
Aluminium Oxide, Al_2O_3	0.75
Iron Oxide, Fe_2O_3	0.27
Calcium Oxide, CaO	0.66
Magnesium Oxide, MgO	0.24
Potassium Oxide, K_2O	0.25
Sodium Oxide, Na_2O	0.30
Total	98.87 %

As a result of these analyses the bead material may be definitely classified as 'Egyptian faience' which consists mainly of finely powdered quartz.

Pure powdered quartz could not be bound into a cohesive mass by any of the technical means known in antiquity. In the case of this faience therefore the quartz particles must have been bound together by some special matrix. Different suggestions have been made concerning the nature of this cohesive or binding substance[1]. The most natural of these assumes that the quartz powder was saturated with a solution of potash or 'natron'. Potash was obtained from wood ash and natron which consists of sodium carbonate, sodium bicarbonate, sodium chloride, and sodium sulphate was taken from salt rich desert lakes. During the subsequent firing the quartz formed potassium and sodium silicate respectively these comprising the special binding or matrix material.

---

[1] Cf. A. LUCAS, *Ancient Egyptian Materials and Industries*^{2}, London 1934.

The remaining portions of the admixture mainly disappeared during the firing process, the presence of a matrix being indicated only by the appearance of a percentage of potassium and sodium.

The Egyptian faience was often provided with a surface glaze. The present beads, however, were entirely lacking in this respect either from the beginning or because of a complete disappearance of the glaze.

2. Glass Beads (of natural glass?).

From a physico-chemical standpoint the material of these beads must be described as glass though the more evident characteristics are not found here which usually belong to this substance. The beads have an extremely low density — they float on water — due to a high degree of porosity.

The material in one of the beads examined was solely of a light yellow colour. The major portion of the second bead showed the same colouring but darker areas were also noticeable.

An X-ray analysis of the entirely yellow coloured bead revealed that its main mass was amorphous (glassy). Faint interferences of quartz were apparent.

A microscopic examination of the second bead made by Professor BACKLUND agreed entirely with this result. According to his study the bead consisted of spherolitic glass with fine concentric zoning and radial rays. The glass contained a few rounded remains of quartz. The dark portions were basaltic interspersed with pyroxene needles (monoclinic) together with small carbonate clumps and dark glass. Professor BACKLUND states that the beads in fresh condition and strongly illuminated must have shown beautiful colours and believes it probable, though not absolutely certain, that the material is a natural product.

3. Bead-filling of magnetite sand.

This consisted of a dark sand-like material which according to the information received comprised the filling in hollow beads of gold plate. The sand contained a high percentage of magnetite. The presence of magnetite in the separate grains was so great that only 8 weight percent of the sample could not be lifted with a permanent magnet. The magnetite content was also confirmed by X-ray. No attempt was made to determine the remaining mineral components.

Magnetite sand is known from many sea, lake, and river strands. It is most probable that it was used as bead-filling on the grounds of its high specific weight [1].

[1] CAROLINE RANSOM WILLIAMS, *Gold and Silver Jewelry and related Objects*, *Cat. of Egyptian Antiquities*, New-York 1924 gives the result of an examination of the filling of two Egyptian earrings from the 18th Dynasty, probably of the period 1500—1350 B C Mr WHITLOCK who carried out the examination states "a common association of sand, containing a variety of minerals, such as magnetite, garnet crystallite and quartz" Presumably it was originally mixed with a binder. When the gold used for such jewellery was very thin the apparent wealth of metal was increased by filling a mere thin shell with such material. So far as I have been able to determine the Egyptian practice first occurs during the 18th Dynasty but was then practised down to the Classical Period. EVANS mentions the practice on Crete, cf above p 79. It seems to me very probable that the goldsmiths of the Aegean area have taken over the technique at least as early as the 15th century from Egypt A W. P

Additional Note
on the Mycenaean helmet and a Homeric Epithet.

By Martin P. Nilsson.

THE Mycenaean helmet, found at Dendra and described above, pp. 43 and 119 ff., affords an explanation of a difficult Homeric expression. Whilst the Achaeans are often called *κάρη κομόωντες*. in one passage the Abantes are called *ὄπιθεν κομόωντες* (Il. II, 542). The ancient explanation, which Strabo, X, p. 465, ascribes to Archedemos from Euboea, is that they shore themselves over the forehead, because in the battle their adversaries grasped them by the forelocks and pulled them down; because of this they were called Couretes. According to Plutarch, Theseus, ch. 5, and Polyaenus, I, 4, Theseus shore himself in the same manner. This explanation is evidently an autoschediasma without any factual basis; for the warriors wore helmets in the battle and their forelocks were thus invisible. The Dendra helmet, reconstructed according to the indications provided by the holes on its top (Fig. 114), and the helmet represented on the stela from the Fifth Shaft Grave (cf. above p. 121) have the hairs of the crest hanging down on the wearer's neck, he was *ὄπιθεν κομόων*. On the contrary the ordinary helmet had an upright crest (*κυνέην* — — — *ἵππουριν, δεινὸν δὲ λόφος καθύπερθεν ἔνευεν*. Il., XVI, 138), the wearer was *κάρη κομόων*. Thus, our helmet helps us to interpret correctly an unexplained Homeric expression and is a further proof of the preservation of Mycenaean elements in Homer.

Index.

Aah-hotep, 192
  — , tomb of, 178
Abantes, 199
Abusir, sarcophagus, 115
Achaeans, 186 f.
Adriatic Sea, 147
Aeolian capital, 48, 130 ff.
Agate, 148
  — , sealstones, 48, 81, 83
Agenor, 194, 196
Ahmose, son of Ebana, 192
Ἀΐδης, 123
Aigyptos, 194 f., 196
Akhenaten, 194, 196
Alabaster vases, 24, 31, 149
Alishar Hüyük, ear-pendants, 77
Altar, 133
Amber, 147
  — , beads, 57, 58, 87
Ameis-Hentze, 109, 124
Amethyst, 146
  — , beads, 29, 49, 101, 146
Amon, 189, 192
Amosis, king, 178, 192, 193
  — — , battle-axe, 178
  — — , dagger, 178, 189
Amulets, 190
Amyklai, 134
Analyses, chemical, 197 f.
Anapa, sarcophagus, 115
Andrae, W., 130
Aniconic representation, 132, 134 f., 190
Animal skin, 81, 133, 160 f., 190
Aphrodite, 134
Apollon, 134
Aqaiwasha, 195
Argive Heraeum, cave-ossuarie, 165
  — — , chair of terracotta, 100
  — — , chamber tombs, 116, 153, 155, 157 f., 160, 162, 169, 171
  — — , gold beads, 77
  — — , lamp, 107
  — — , larnax, 114
  — — , necklace, 79, 150
  — — , pottery, 69, 151
  — — , scarabs, 176
  — — , wooden remains, 112, 162
Argive saga cycle, 194
Argolis, Egyptian objects, 176
Argos, 194 f.
Ariadne, 134
Arne-Gla, palace, 16
Arrow-heads, bronze, 29 f.
  — , flint, 48 f.
  — , obsidian, 48 f.
Arrow-sharpener, 14
Art motif, besieged town, 186
  — — , equestrian representation, 187
  — — , hippopotamus capsizing boat, 184 f.
Art motif, hunting scene, 187 f.
Artemis, 134
Artisans, 148 f.
Artsa, sarcophagus, 112, 115
Asine, 152
  — , baetylic stone, 134
  — , beads, 29, 79, 80
  — , casting-moulds, 151
  — , chamber tombs, 154, 158, 159, 174, 181
  — , ear-pendants, 77
  — , Egyptian object, 176
  — , house types, 16
  — , ivory mounting, 131
  — , lamps, 106, 107
  — , representation of waves, 138
  — , 'Three Palms Motif', 41
Assuan, Kakemet's tomb, 166
Assyria, helmet type, 122
Assyrian art, 138
Astarte, 134
Athena, 108 f., 111, 123
Athenaios, 108
Athens, chamber tomb, 94
  — , necropolis, 152
Avaris, 182, 186, 192, 193
Avenger, in similes, 189
αὐλῶπις, 124 f.

Babylonia, clay larnakes, 117
  — , helmet type, 122
Backlund, H. G., 198
Badari civilization, 146
Baetylic stones, 81, 134 f.
Baetylus — gravestone, 134

Baltic Sea, 147
Barter, 145, 149
Bath tubs, 114
Beads, cf. Amber, Amethyst, Faïence, Glass, Gold, Stone
— , analyses, 197 f.
Bee-hive tomb, origin, 164, 167
Belos, 194
Bénédite, G., 170
Beni Hasan, tombs, 184, 186
Berbati, bee-hive tomb, 151
— , excavations, 20, 151
— , gold plated handle, 91
— , lead wire in chamber tomb, 50
— , potteries, 151
— , pottery, 36, 66
Bertos, N., 17
Bier, wooden, 112, 119, 162
Birds, 133 f., 137, 139 ff.
Bird's eye perspective, 48, 83, 182
Blegen, C. W., 26, 28, 29, 33, 35, 43, 45, 49, 50, 57, 70, 71, 72, 73, 79, 98, 99, 100, 101, 103, 104, 109, 112, 113, 114, 116, 153, 155 f., 157 f., 159, 160, 162, 165, 170, 171, 177
Boar on sealstone, 83 ff., 148
Boars' tusks, 14, 30, 45 ff., 126 ff.
Boeotia, 70
Boëthius, A., 164*
Bone, mounting, 37
Bonnet, H., 122, 129
Booty, 149
Bosanquet, R. C., 115, 116
Bouquet, Egyptian, 143
Bow, 184
Bowmen, 184
Bowls, bronze, 35, 36
Box, 47, 58, 131, 179 ff.
Bracelet ornament, 82, 83
Brazier, 109, cf. also Pottery, Shapes
Broneer, O., 103, 134
Bronze, arrow plates, 29
— , bowls, 35, 36
— , button, 64
— , cramps, 14
— , dagger, 43
— , handle, 11
— , helmet, 43, 112, 119 ff.
— , knives, 11, 15, 35, 45, 97
— , lamp, 45
— , mirror, 35
— , mounting, 11, 97, 101
— , nail, 11
— , needle, 9
— , pan, 106 f.
— , pin, 37
— , 'razors', 35, 45
— , rivets, 36
— , scale pans, 73
— , sword, 35, 37
— , tweezers, 9
Bronze-casters, 150 f.
Bull, in similes, 189
— , on dagger blade, 178
— , on sealstone, 86
Bull's head, 87
Burial costums (L. H.), 119, 157
Burial costums (M. H.), 116 f.
Buttons, cf. Clay, Stone, Steatite

Calydonian hunt, 148
Capital, Aeolian, 47 f., 130 ff.
— , Egyptian, 142 ff.
— , Ionic, 47 f., 129 ff.
Caria, 132, 184
Casting-moulds, 147, 149, 151
'Cavalier perspective', 83
Cave-burials, 164, 165
Cave-dwellings, 164, 165
Cave-ossuaries, 165
Cecil, Lady William, 166
Cenotaph, cf. Dendre, chamber tomb No. 2.
Chair of terracotta, 100
χαλκοπάρηος, 124 f.
Chamaízi, lamps, 106
Chamber tombs, 152 ff.
— — , abnormal, 169 ff.
— — , access, 174
— — , accessory chambers, 23, 31, 38 f., 157 f., 162, 170 f.
— — , bench, 39, 41, 119, 159
— — , blocking walls in dromos, 21, 31, 37, 51, 59, 154
— — , borings in the walls, 23, 162
— — , burial customs, 155 ff., 160, 162
— — , characteristics of age, 158
— — , charcoal and ash, 23, 32, 53, 56, 59, 63, 74
— — , dromoi, different types, 153, 174
— — , dromoi, slope of, 153
— — , dromoi, steps in, 154
— — , enclosure, 63
— — , filling of dromos, 154
— — , form of chamber, 157
— — , fumigation, 30, 32, 103, 109
— — , grooves through stomion, 21, 40, 53, 119, 155 ff.

Chamber tombs, niche, 53, 58, 159, 174
— — , orientation, 17, 153
— — , origin, 158, 164 ff.
— — , saddle roof 23, 55, 158
— — , secondary burial, 108, 154, 155
— — , several interments, 153
— — , shaft, 23, 31, 53, 55 f., 63, 97, 119, 159
— — , skeletons, 23 f., 32, 41, 56, 63, 74, 97, 101
— — , steps in dromos, 20, 154
— — , step in stomion, 31, 155
— — , stomion, 154, 155, 157
— — , stone packing in stomion, 21, 53, 59, 95, 97, 157
— — , stone paving in dromos, 53, 59, 155
Chariot, 186 f., 188
Chest, 115 f.
China, horses, 188
Christos, lamps, 106
Clanship, 152
Clarke, J. T., 130
Clay, buttons, 12, 19
— , spool, 11
Climate, alterations, 111, 178
Coffin, 41, 111 ff., 131, 157, 159, 160, 177, 191
Coin, Roman, 7
Conventionalization, 139, 149
Coral motif, 90, 139
Corinth, necropolis, 152
Crete, beads in shield form, 29
— , Egyptian objects, 176
— , filling of gold sheets, 79, 198*
— , fresco painting, 149
— , Haunebt, 193
— , lamps, 104 ff.
— , larnakes, 112, 114 f., 117
— , pottery patterns, 28, 42, 66, 68, 70, 75, 142
— , pottery shapes, 28, 107
— , representations on seal-stones, 83
— , seal-impression, 184
— , sheating with gold, 86
— , tombs, 165 ff.
— , wishbone handle, 36
Croton oil, 102*
Cult of the dead, 58
Cult representations, 81, 132 ff.
Cuprum, 124
Cymation, 131
Cyprus, 132, 189
— , baetylic stones, 134
— , bronze tripods, 107
— , helmet type, 122
— , lamps, 111
— , pendant beads, 87
— , sculptures, 76 f., 81
— , spoons, 90
— , wishbone handle, 36

Danaë, 195
Δαναοί, 195
Danaos, 194 f., 196
Danau, Danauna, Danuna, 195
Dancing, 81, 134
Deer on gold ring, 187 f.
Deir-el-Bersha, tomb, 171
Deir-el-Gabrâwi, tomb, 173
Deir Rîfa, tomb, 171
Delphi, gold volutes, 131*
— , omphalos, 134
Dendra, bee-hive tomb, 36, 48, 74, 78, 107, 138, 142, 148, 149, 153, 154
Dendra, chamber tomb No. 1, 17, 153, 154
— , chamber tomb No. 2, 17, 31, 75, 95, 103 f., 107, 108, 126, 144, 149, 158, 162
— , chamber tomb No. 3, 17, 100, 153
— , chamber tomb No. 4, 17
— , chamber tomb No. 5, 17
— , chamber tomb No. 6, 17, 20 ff., 149, 153, 154, 155, 157, 158, 159, 168, 171
— , chamber tomb No. 7, 17, 31 ff., 153, 154, 155, 159
— , chamber tomb No. 8, 17, 37 ff., 103 f., 108, 111, 116, 119, 126, 129, 153, 154, 155, 157, 158, 159, 160, 171
— , chamber tomb No. 9, 17, 51 ff., 154, 155, 157, 158, 159, 167
— , chamber tomb No. 10, 17, 59 ff., 132 ff., 135 ff., 137 ff., 144, 149, 150, 151, 154, 155, 159
— , chamber tomb No. 11, 17, 95 ff., 107, 153, 155, 157, 159
'Dendra mystery', 20
Dendra, ostrich-egg, 146
— , pottery pattern, 145
— , sword, 150
— , uninvestigated tombs, 17
Dictean Cave, lamps, 106
Dimini, gold-foil lilies, 77
— , tomb, 165
Distaff spool, cf. Clay, Spool

Dorian migration, 110 f.
Double-axes, 143
Draughtboard, 11, 47, 131
Dress-weights of lead, 50

Ear, 190
Ear-pendants, 76 f.
Early Helladic, habitation, 17 ff., 51, 63
— —, pottery, 57, 63
— —, tombs, 165
Egypt, amethyst, 29, 49, 146
—, burial customs, 160
—, contacts with Mycenae, 157, 162, 176 ff.
—, exportation of gold, 146
—, exportation of ivory, 145 f.
—, exportation of ostrich-eggs, 146
—, exportation of semi-precious stones, 146
—, glass beads, 36, 149
—, gold plating of ivory, 150
—, grooves in tomb, 156
—, helmets, 122
—, hieroglyphs, 41, 73, 104
—, importation of pottery, 70, 177
—, lamps, 102, 104
—, localization of the realm of the dead, 152
—, mummification, 118
—, mummy coffins, 112 f., 116, 117
—, offering stands, 107
—, origin of capital, 143
—, ostrich-egg, 146
—, palm motif pattern, 41
—, papyrus wand-waz, 90, 142 f.
—, representation of tribute, 145, 150
—, representation of waves, 138
—, rock-cut tombs, 159, 166, 168 f., 170, 171, 173
Egypt, rock-cut tombs, access, 174
—, scarabs, 166
—, stone vessels, 24
—, ushebtis, 33
—, weighing of souls, 73
El Amarna, letters, 150, 195
— —, pottery, 75, 191, 196
El Assassif, lichens, 177
El-Kâb, inscription, 186
—, mortuary chapel, 167
—, tomb, 171
Electron, tack plated with, 56 f.
Eleusis, necropolis, 152
Elliot Smith, 118
Embalming, 117 f.
Enclosure, 81, 134
Enkomi, ivory box, 47
—, ivory head, 129
—, pendant beads, 87
Enthroned figure, 100
Epaphos, 194
Epano-Zakro, tombs, 165
ἐπὶ κροτάφοις ἀραρυῖα, 125
Epiphany, 133, 190
Eponyms, 195
Erechtheion, North Porch, 131
Erman-Ranke, 160, 184*
Erymanthian boar, 148
Etruria, forks, 126
Euboea, tombs, 165
Europa, 194
Eutresis, boars' tusks, 128
Evans, Sir Arthur, 26, 28, 29, 36, 41, 45, 47, 49, 55, 58, 64, 66, 68, 70, 73, 75, 77, 78, 80, 81*, 82, 83, 86, 90, 91, 104, 106, 109, 113, 121*, 129, 131, 132, 133, 134, 135, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 162, 165, 166, 168*, 184, 185, 190
Eye, 190
Faïence, analysis, 197 f.
Faience, beads, 86, 87, 101
—, figurine, 57 f.
—, vase, 176*
Figurine, faience, 57 f.
Figurines, terracotta, 9, 10, 11, 12, 33, 37, 98, 100 f., 152, 171
Filling of gold beads, 79, 198
'Fimbul winter', 111
Fimmen, D., 113
Fir-trees, imported in Egypt, 177
Fischer, Th., 110*
Fish, 138, 179
Fishing-spear, 126
Flint, arrow-heads, 48 f.
'Flying gallop', 178, 188
Flying schema, 134, 140 f.
Fork, 126
Forsdyke, E. J., 73, 166
Fortress, 182, 185 f.
Foucart, G., 189
Fresco painting, 149
Frescoes, influence on gems, 82
Furtwängler-Loeschke, 58*, 82
Furumark, A., 2, 11, 61, 66, 68, 79, 135*

Gaming table, 12
Gams, H., 111
Garnet, 146
Gem, cf. Sealstone
Gem-engraving, 86, 148
Gem workshop, 147 f.
Geometric decoration, 139, 140, 141
Geometric Period, 100, 108
— —, burial hearse 155 f.
— —, helmet types, 122
Geometrizing, 139
Gezer, pottery pattern, 75
Girdle, 80 f.
Gjerstad, E., 107, 111
Glass, beads, 29, 30, 36, 50, 86, 87, 101
—, —, analysis, 198

Glass, beads, workshop, 148
Goat, on sealstone, 29, 82 f.
Goebel, A., 124
Gold, beads, 50, 78 ff.
Gold covering of dead, 118
Gold, cup, 74 f., 141 f.
— , masks, 114, 118, 191
— , necklaces, 77, 78
— , pendant ornaments, 75 ff.
— , pendant spiral, 97
— , rim and handle, 90 f.
— , ring, 36, 81, 132 ff.
— , rosettes, 57, 80
— , sheathing, 11, 81, 86, 91
Gold on silver, 91
Gold plating, 139
Goldman, Hetty, 128
Gournia, lamps, 106, 107
— , tombs, 165
Granlund, E., 111
Granulated work, 78, 79
Grave-robbers, 24, 53
Great Bear, 162
Great Nature Goddess, 134
Griffin, 178
Grooves through stomion, 21, 40, 119, 155 ff., 162, 191

Hades, 152 f.
Hades, κυνέη Ἄϊδος, 123
Hagia Eirene, lamps, 106
Hagia Photia, tombs, 165
Hagia Triada, pendant beads, 87
— — , rhyton, 121,182
— — , sarcophagus, 115, 116, 133, 160 f., 162
— — , seal, 129
— — , seal-impression, 133, 141
Hagios Nikolaos, tombs, 165
Hair ornaments, 80
Hall, H. R., 47, 107, 115, 117, 143, 145
Handicrafts, 145
Hathor cow, 190
Haunebt, 192 f.
Havara, tomb, 166
Helbig, W., 117, 124 f.
Helmets, 119 ff., 199
— , boars' tusks, 14, 126 ff., 182
— , bronze, 43, 112, 119 ff., 199
Hephaistos, 150
Herakles, 148
Heraldic animals, 83, 148, 150, 188 f.
Herodotos, 102, 110
Hesychios, 123, 126
Hierakonpolis, tomb, 173
Hieroglyphs, Egyptian, 41, 73, 104, 178
Hippopotamus, 184 f.
Hippopotamus teeth, 146
Hittites, helmet types, 122, 129
Homer, 108 f., 115, 122, 125, 126, 190, 195
— , Il. I, 436 126
— , — V, 175 ff. 124 f.
— , — —, 845 123
— , — X, 261 ff. 127 f.
— , — XII, 182 ff. 122, 124
— , — XIII, 805 125
— , — XV, 609 125
— , — —, 648 125
— , — XVI, 41 125
— , — —, 278 ff. 125
— , — —, 793 ff. 123
— , — XVII, 294 f. 122, 124
— , — XX, 397 f. 123, 124
— , Od. III, 460 126
— , — XVIII, 307 ff. 109
— , — XVIII, 378 123
— , — XIX, 34 108
— , — —, 63 f. 109
— , — XXII, 102 123
— , — XXIV, 523 124
Homeric similes and metaphors, 189
Horns of consecration, 81, 132 f.
Horse, 186 ff.
Hounds, 179 ff.
Hunting leopards, 179
Hutchinson, R. W., 167
Hyksos, 182, 187, 192, 194, 195
Hypermnestra, 195
Hägg, G., 197 f.

Ialysos, 28
— , chamber tombs, 168
Idalion, pieces of bronze helmets, 120
Importation, 141 ff.
Interchange of products, 145 ff.
Io, 194, 196
Ionic capital, 47 f., 129 ff.
Isopata, chamber tombs, 58, 168
— , Royal Tomb, 143,166, 167, 176
Ivory, 145 f.
— , bowl, 91
— , 'Chessman', 11
— , fragments, 63
— , mountings, 47 f., 130 f.
— , plaque, 11
— , rod, 86
— , seals, 145
Ivory carvers, 147

Jasper, 146
Jutland, 147

Kalauria, scarab, 187
Kamose, king, 189
Kanopos, inscription, 192
Karnak, stela, 189
Karo, G., 49, 58, 73, 76, 113 ff., 118, 128, 145, 147, 149, 176*
Kees, H., 116, 117, 146, 152
Keftyew, 189
Kephallenia, tombs, 165, 174
Keramopoulos, A., 50, 114, 148, 155, 168, 173
Kjellberg, L., 130, 187*

Knife, cf. Bronze
Knossos, amethyst beads, 49
— , box, 47
— , draughtboard, 47, 131
— , faïence figurines, 58
— , — houses, 132
— , — pendant, 80
— , — relief, 138, 139
— , frescoes, 47, 77, 78, 80, 90, 91, 132, 134, 140, 142, 143
— , gold plating, 150
— , gold ring, 135
— , ivory relief, 129
— , lamps, 45, 103, 104,
— , 107, 108
— , Mavro Spelio Cemetry, 73, 165 f.
— , pottery pattern, 42, 138, 144
— , prehistoric tombs, 109
— , sculptured friezes, 91
— , seal-impressions, 132, 133, 138
— , shell cameo, 80
— , spiral decoration, 47, 66
— , steatite pyxis, 133
— , — rhyton, 138, 139
— , 'Temple Tomb', 166
— , tholos tomb, 167
— , Tomb of Zeus, 134
— , Town Mosaic, 132
— , workshops, 147
Koldeway, R., 130
κόρυς, 122 ff.
Koumása, lamps, 106, 107
Kouroniotis, K., 77
Kukahn, E., 119 ff., 128, 129
Kulczycki, G., 100
κυνέη, 122 ff.
Kyparissis, N., 165, 174
κάπριον, 124

Lamentation, 134
Lamps, 24, 29, 45, 56, 57, 101, 102 ff.
Lamp-stand, 107
λαμπτῆρες, 102, 109
Lange, J., 130
Larnax, 113, 114 f.
Laurent-Täckholm, Vivi, 177
Lead, 11, 13, 14, 50, 64, 98, 101
Ledges in shaft, 55, 167
Libyans, 189
Libye, 194
Lichens, imported into Egypt, 177
Lighting, 102 ff., 109
Linear ornaments, origin, 131
Lion, heraldic animal, 188 f., 190
— , in similes, 189
— , on dagger blade, 178, 189
— , on sealstones, 83, 148, 150
— , rending bull, 48
— , — goat, 82
Lisht, tomb of Senebtisi, 156
Local manufacture, 141 ff.
Localization of the realm of the dead, 152 ff.
Luschan, F. von, 130, 142
Lyncheus, 195
Lysias, 110*

Mace-head, cf. Stone
Mace-Winlock, 118, 156
Magasa, tombs, 165
Magnetite sand, 79, 88, 198
Maiuri, A., 168
Manetho, 192
Marinatos, S., 113, 184
Mariolopoulos, E. G., 178*
Mastaba, 159, 168
Medallion-like fields, 139
Medinet Habu, reliefs, 187
Meir, tombs, 90, 174
Memphis, tombs, 170
Menidi, ivory ornament, 80
Mercenaries, 194, 195
Merneptah, 195
Metallic prototypes of pottery shapes, 135 ff.
Meurer, M., 113, 116, 118, 130, 143
Meyer, E., 182, 192 f., 194
Miamou, tombs, 165
Middle Helladic, burial methods, 165
— — , habitation, 12, 20
— — , pottery, 6, 12, 16
Midea, 3 ff.
— , fortress wall, 3 ff., 13, 16
— , gate, eastern, 3 f., 16
— , gate, western, 6
— , gate towers, 6, 13
— , 'Palace', 7 ff., 16
— , pottery, 151
'Midean style', 145
Mill, cf. Stone
Mirror, 35
Mitanni, seal, 188
Mochlos, lamps, 106
— , pendant beads, 87
— , tombs, 165
Mond, R., 159
Monro, D. B., 109
Monster, 184
Mummification, 117 f.
Mycenae, 16
— , Atreus' tomb, 138, 158, 162, 168*, 171
— , chamber tombs, 155, 157, 168, 170 f., 171, 174
— , chamber tombs, tomb 518, accessory chamber, 170
— , chamber tombs, tomb 518, helmet, 127
— , chamber tombs, tomb 518, pottery, 30, 68, 109, 157

Mycenae, chamber tombs, tomb 518, steps in dromos, 154
— , contacts with Egypt, 157, 162, 176 ff.
— , dagger blades, 178
— , frescoes, 149, 186
— , gold beads, 77
— , gold plate, 80
— , ivory relief, 128, 129
— , lamp, 107
— , larnax, 114
— , lion gate, 190
— , ostrich-egg, 146
— , Shaft graves, Egyptian objects, 149, 178 ff
— , Shaft graves, gold, 195
— , Shaft graves, method of burial, 112 ff., 117, 118 f.
— , Shaft graves, stelae, 121, 186 f.
— , Shaft graves, stone ring, 63
— , Shaft Grave I, date, 181
— , Shaft Grave I, mummy, 117
— , Shaft Grave I, pottery, 26
— , Shaft Grave II, date, 181
— , Shaft Grave II, faience vase, 176*
— , Shaft Grave II, ivory, 145
— , Shaft Grave III, date, 181
— , Shaft Grave III, gold objects, 113, 118, 132, 139, 140, 181
— , Shaft Grave III, scales, 73
— , Shaft Grave IV, date, 181
Mycenae, Shaft Grave IV, boars' tusks, 127, 128, 129
— , Shaft Grave IV, gold plates, 132
— , Shaft Grave IV, gold ring, 187 f.
— , Shaft Grave IV, ivory, 145
— , Shaft Grave IV, ostrich egg, 146
— , Shaft Grave IV, silver rhyton, 82*, 129, 138, 140, 181 ff., 186
— , Shaft Grave IV, sword blade, 178
— , Shaft Grave V, date, 181
— , Shaft Grave V, dagger blades, 178
— , Shaft Grave V, dagger blades, 'Nile Piece', 141, 178 f., 186
— , Shaft Grave V, ivory, 145
— , Shaft Grave V, ostrich egg, 146
— , Shaft Grave V, silver vase, gold-plated, 91
— , Shaft Grave V, stela, 121, 189
— , Shaft Grave V, sword, 188
— , Shaft Grave V, wooden box, 179 ff., 186
— , Shaft Grave VI, date, 181
— , Shaft Grave VI, arrow-heads, 49
— , Shaft Grave VI, burying, 119
— , signet ring, 133
— , sword, 150
— , workshops, 147
Müller, K., 121, 141, 149
— , W. M., 143

Nail, cf. Bronze
Navarro, J. M. de, 147
Neandria, Aeolian capital, 130
Near East, influence on clay larnakes, 117
Necklaces, 77, 78, 79, 149
Necropolis, 17 ff., 152 f.
Needle, cf. Bronze
Neolithic Period, 165
Niche, 167, 169, 173, 174, cf. also Chamber tombs
Nile ducks, 140, 141, 179
'Nile Piece', 141, 178 f., 186
Nilsson, M. P., 29, 57, 73, 100, 107, 125, 129, 133, 134, 147, 161, 190
Nubia, gold, 146, 194

Obsidian, arrow-heads, 48 f.
— , flakes, 63
— , knife, 57
Octopus cup from Dendra, 138, 139, 141, 142, 149, 182
Offering stands, 107
Old-Corinth, tombs, 165
Olive, 102, 110, 185
Olive-oil, 102, 110
Omphalos, 134
Orchomenos, bee-hive tomb, 158, 171
Orientalizing Period, 132
Orientation of the dead, 152
Ostrich-egg, 146
Over-lapping in art, 82

πάγχαλκος, 124 f.
Palaikastro, helmet, 122
— , lamps, 106, 107
— , ostrich-egg, 146
— , pottery, 42
— , seal, 139
Palestine, 195, 196
Palimpsest, sealstone, 83, 148
Papavasileiou, G., 165
Paphos, 134 f.

Papyrus capital, 74, 141 ff.
Papyrus Harris, 185
Papyrus motif, 138, 140, 142
Paribeni, R., 160 f.
Pattern, the same in different materials, 144 f.
Pectoral, Egyptian, 113, 118
— , Mycenaean, 113, 118
πήληξ, 123
πεμπώβολον, 126
Pendlebury, J. D. S., 114, 165 f., 176, 177, 187, 194
Peoples in the North, 192, 193 194
People of the islands, 189, 193, 194
Perspective, 48, 83, 139, 140, 182
Petrás, lamps, 106
Pfuhl, E., 108
Phaestos, gold ring, 133
— , ivory, 145
— , lamps, 106
— , pottery, 66
— , seal, 184
Philistines, 195
Phoenicia, 195, 196
Phoenician art, 138, 143
Phrygians, 164*
Phylakopi, fresco, 140, 141
— , lamps, 106, 107, 108
Pictographs, 189, 190
Plant remains in mummy coffin, 177
Platanos, lamps, 108
Porter-Moss, 166, 167, 169, 170, 171, 173
Porti, lamps, 106, 108
Poseidon, 194
Post, L. von, 111
Potter's clay, 151
Pottery, Byzantine, 7
Pottery, Early Helladic, 7, 16, 20
— , 'egg shell class', 137
— , 'Granary' style, 15
Pottery, 'Hagia Marina', 13
— , kiln, 148, 151
— , Late Helladic, 7, 9, 10, 12, 13, 14, 15, 16, etc.
— , matt-painted, 10, 12, 13, 14, 15
— , Middle Helladic, 7, 10, 12, 13, 14, 15, 16
— , Minyan, 7, 10, 12, 13, 14, 15, 135
— , 'overfired', 14, 15, 151
— , Palace Style, 24, 41, 47, 56, 58, 59, 63, 64 ff., 72, 75, 78, 90, 91, 140, 151
Pottery patterns, Angles with curved lines inside, 72
— — , 'Arcade pattern', 64
— — , 'Bead festoons', 70
— — , 'Bulbous plants', 64
— — , Checquered pattern, 28
— — , Chevrons, 99
— — , Concentric curved lines, 99
— — , Concentric curved and paralell wavy lines, 58
— — , Double axes, 26, 28
— — , Figural ornamentation, 10, 11, 14
— — , Flower-like ornament, 65
— — , Four-sided figures with curved outlines, 65
Pottery patterns, Heart-shaped leaves, 41, 42, 99
— — , 'Hills' in wavy contour, 69, cf. 'Switch-back'
— — , Inverted commas, 66
— — , Ivy leaf, 41, 65, 66, 71, 142
— — , 'Laufender Hund', 68, 72, 93
— — , Lily-shaped flower, 99
— — , Octopus decoration, 24, 98
— — , 'Ogival canopy', 41 f.
— — , Palm motif, 41, 68
— — , 'Pendant crocus', 69, 70
— — , 'Quirks', 68
— — , 'Racket-design', 10, 28
— — , Reticulate wave-pattern, 138
— — , 'Sacral ivy', 144
— — , Scale pattern, 33, 68, 70, 138
— — , S-ornament, 68, 93, 144
— — , Spiral decoration, 24, 25, 43, 65, 66, 69
— — , Stellaria, 33
— — , Stipple ornament, 26
— — , Swastika, 43
— — , 'Switch-back', 26, 33, 70, 99

Pottery patterns, Trefoil-leaves, 42
— —, Tricurved arch net, 68, 70
— —, Vertical strokes, 72
— —, 'Wavy cross pattern', 69, 70
— —, Wavy lines, 41
— —, 'Wheel' pattern, 26, 28, 33, 70, 99
Pottery, perforation of handles, 70
—, Red-slip, 13
—, 'Reserved technique', 65 f.
—, 'Rillenkeramik', 7, 10
Pottery shapes, Alabastron, 12, 26, 28, 33, 69, 70, 93, 99
— —, Askos, 26, 28
— —, Bowl, 100
— —, Bowl, open, 10, 93, 94, 99
— —, Bowl, shallow, 33, 43, 57 (E. H.), 98
— —, Brazier, 28, 30
— —, Cup, handleless, 43, 104
— —, Cup, shallow with loop-handle, 70, 93
— —, Cup, Vaphio type, 24
— —, Ewer, 72, 137
— —, Jar, hole-mouthed, 28, 30
— —, Jar, three-handled, 33, 41, 64, 66, 67, 68, 69, 70, 72
— —, Jug, 12
Pottery shapes, Jug, with bridged spout 42 f.
— —, Ladle, 24, 103
— —, metallic portotypes, 135 ff.
— —, Minyanizing, 12, 14
— —, Saucer, 10, 137
— —, Scoop, 24, 103
— —, Scoop lamp, 24, 29, 104
— —, Stemmed goblet, 10, 12, 28, 32, 35, 43, 71, 92, 93, 98, 100, 135 ff., 137 ff.
— —, Stirrup vase, 10, 12, 33, 58, 59, 99
— —, 'Tea-cup', 26, 28
— —, Tub-shaped vessel, 107
Praisos, bee-hive tomb, 167 f.
—, helmet, 122
Prinia, lamps, 107
Przyluski, J., 130
Pseira, pottery, 138
Ptah, 190
Puchstein, O., 130
Pulesata, 195

Queen's tomb, 95, 141, 148
Quseir el-Amarna, tomb, 171

Ramesses II, 194, 195
Ramesseum, besieging scene, 186
Ramp to tomb, 166, 174
'Razor', 35, 45
Re-cutting of sealstone, cf. Palimpsest
Reichel, A., 138*
—, W., 124, 125, 127
Rekhmire, tomb of, 90, 194
Religion, pre-Greek, 190
Representation of rocky ground, 137 f., 178, 188
— of sea bottom, 138
— of waves, 90, 137 ff., 182
Reserved technique, 65 f.
Resharpening of arrow-heads, 48
Ring, gold, 81, 132 ff.
'Ring of Minos', 132*
Rock motif, 90, 139
Rodenwaldt, G., 149
Roofing tiles, 9
Royal factories, 150
Running schema, 48

'Sacral ivy', 75, 79 f., 90, 144 f.
Sacred tree, 81
Sanga, 20
Sardinia, gold figurine, 58*
Sardis, ivory head, 76
Savignoni, L., 139, 167 f.
Scale-pattern, 137 ff., 182, cf. also Pottery patterns
Scales, 73
Schefold, K., 130
Schliemann, H., 112, 113, 117, 147
Schweinfurth, G., 177
Schweitzer, B., 179 ff.
Script, 196
—, Cypriote, 73 f.
—, Minoan, 73 f.
Seafaring, 177*
Sealstones, 29, 30, 48, 81 f., 83 ff.
Secondary use of older objects, 176, 181
Semneh, fortress, 185
Senmut, tomb of, 194
Shafts, 166, 167
—, in chamber tombs, 159 f.
Sharuhan, 192
Sheep, horned, on sealstone, 29
Shear, L., 94
Sherden, 194

Shield, curved rectuangular, 184
— , figure of eight, 29
Shrine, 81, 132 ff.
Signet-rings, 81, 132 ff., 190
Silver, crater, 87 f.
— , fragments, 50, 57
— , handle, 56 f.
— , rivets, 43, 45
— , shallow saucer, 90 f.
— , spoon, 90, 144
— , stemmed goblets, 88, 89, 135 ff., 149
Sjöqvist, E., 134
Skid poles, 156 f.
Skirts, length of, 134
Slaughter table, 55, 159
Sledge, burial, 112, 119, 156, 160, 162
Slingers, 184
Slip, greyish on pottery, 92 f., 137
Spacial conception, in gem carving, 83
Spacial conception, in vase painting, 83
Sparta, necropolis, 152
Spata, ivory head, 128, 129
Sphoungaras, tombs, 165
Spiral patterns, 47, 91
Spoon, silver, 90, 144
Staïs, V., 112, 113, 182
Steatite, cf. Stone
Stolpe, H., 147
Stone, arrow-heads, 48 f.
— , arrow-sharpener, 14
— , mace-head, 9
— , mill, 11
— , pendant bead, 64
— , steatite buttons, 10, 11, 12, 49, 57, 101
— , steatite fragment, 63
— , steatite lamp, 56, 57, 101
— , sword pommel, 11
— , tripod, 10
Structure, isodomic, 81, 132
Sumerian art, 137 f.
Support, 107
Swimmers, 184
Sword, 35, 37, 150
Sword pommel, cf. Stone
Syria, 132, 194
Syrian art, 178
Syro-Egyptian fabric, 143
Säve-Söderbergh, T., 145, 146, 181*, 185 f., 194

Tabor, 186
Talanton, 73 f.
Tamassos, pieces of bronze helmets, 121*
Tanis, 186
Technique, filling of gold shell, 198*
— , gold plating of ivory, 150
— , inlaid dagger blades, 178
— , stone relief, 187
— , wood and ivory, 181
Thebes (Egypt), tombs, 170, 171, 173
— (Greece), chamber tombs, 155, 168, 173
— (Greece), fresco painting, 95, 149
— (Greece), larnax, 114
— (Greece), workshops, 148
Thera, necropolis, 152
Thisbe, gold bead-seal, 83
Thutmosis I, 193
— I, scarab, 187
— II, 193
— III, 189, 193
Tiryns, 16, 182
— , bath tubs, 114
— , bronze tripod, 107
— , frescos, 80, 149
Tombos, inscription, 193
Trapeza, tombs, 165
Tree cult, 134, 190
Tribute, 145, 194
Tripod, 107, cf. also Stone
Troy, ear-pendants, 77
Troy, walls, 182
τρυφάλεια, 123
Tsountas, Chr., 58, 102, 147, 150, 152, 157, 170 f., 174
Tueris, 184 f.
Tutankhamen, clothes chest, 187
Tweezers, cf. Bronze

Valmin, N., 134
Vaphio, gems, 82, 83, 129
— , gold beads, 77
— , gold cups, 48, 139, 140, 182
— , gold ring, 190
— , inlaid bronze blade, 140
— , lamps, 106, 107
— , silver saucer, 91
Vase manufacture, 151
Vestibule, 154, 167 f., 169
Vitruvius, 164*
Volo, gold-foil lilies, 77
— , gold-plate, 132
Volutes, 47, 130 f.
Vrouliá, necropolis, 152

Wace, A. J. B., 24, 26, 28, 29, 30,43, 45, 47, 49, 50, 57, 66, 68, 70, 72, 73, 78, 80, 97, 98, 99, 101, 103, 109, 114, 126, 127, 128, 131, 135, 137, 152, 153, 154, 155, 157, 158, 159, 164, 168, 170, 176 f.
Waterfowl, 90, 138, 140
Watzinger, C., 115
Waz-lily, 78, 79, 142
Weighing of souls, 73
West, realm of the dead, 152 f., 160, 191
Westholm, A., 111, 120
Wheel, 188
Whetstone, 48
'Whorl-shell' motif, 47, 90 f., 131
Wide, S., 139
Williams, Caroline Ransom, 78, 79, 107, 198*

Wishbone handle, 35 f.
Wood, box, 47
— , coffin, 41
— , handle, 35
Wood-carvings, 131
Workshops, 147 ff.
Wreszinski, W., 188
Wüst, E., 73

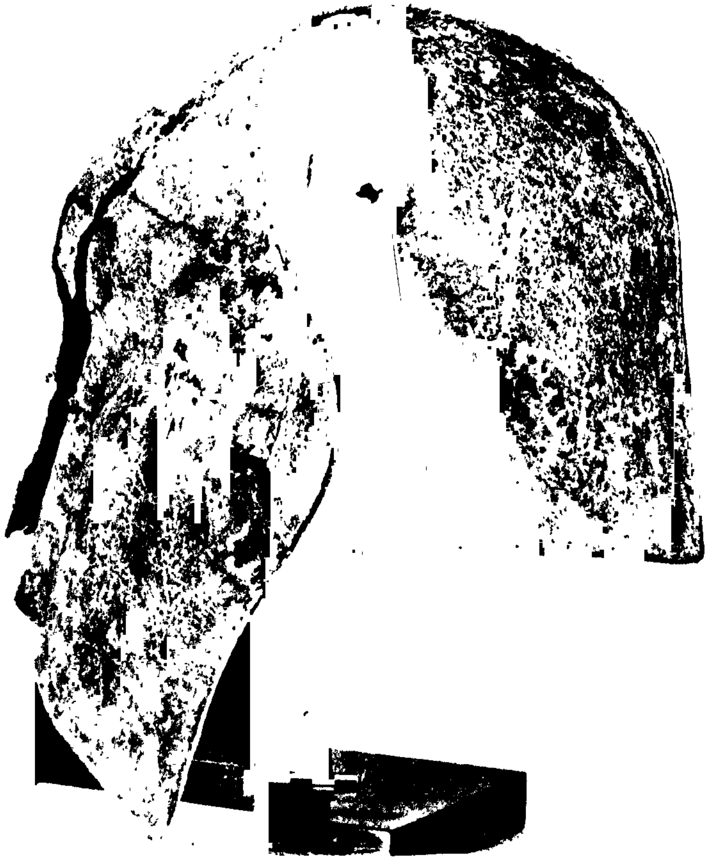
Xanthoudides, S., 104, 106, 112, 114, 116

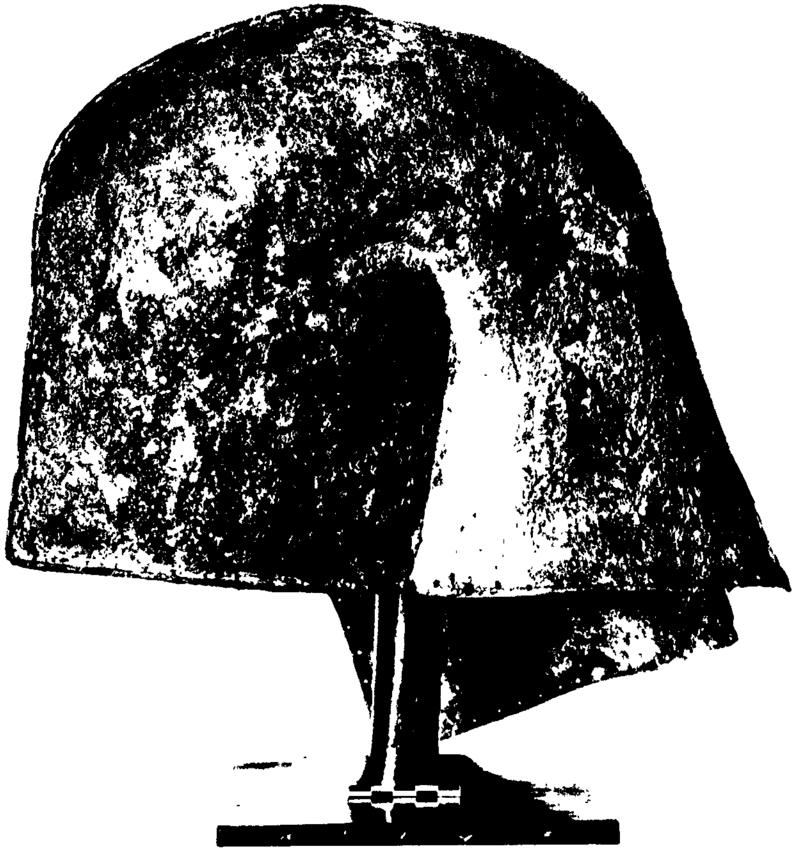
Yazılı-Kaya, reliefs, 129

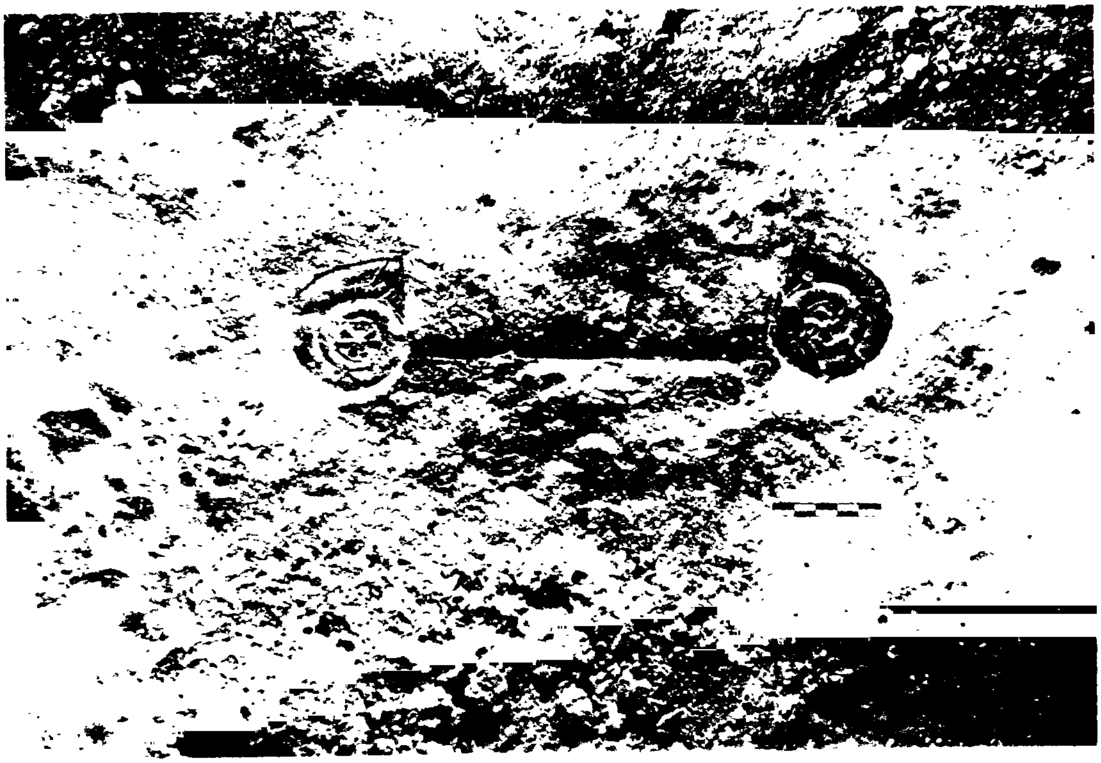
Zafer Papoura, boars' tusks, 129
— — , coffin, 131
Zakró, lamps, 106
Zehetmaier, J., 50
Zeus, 73, 134
'Zwickel'-filling, 130 f.
Zygouries, 103, 106, 109, 114, 164 f.

Åkerström, A., 151*

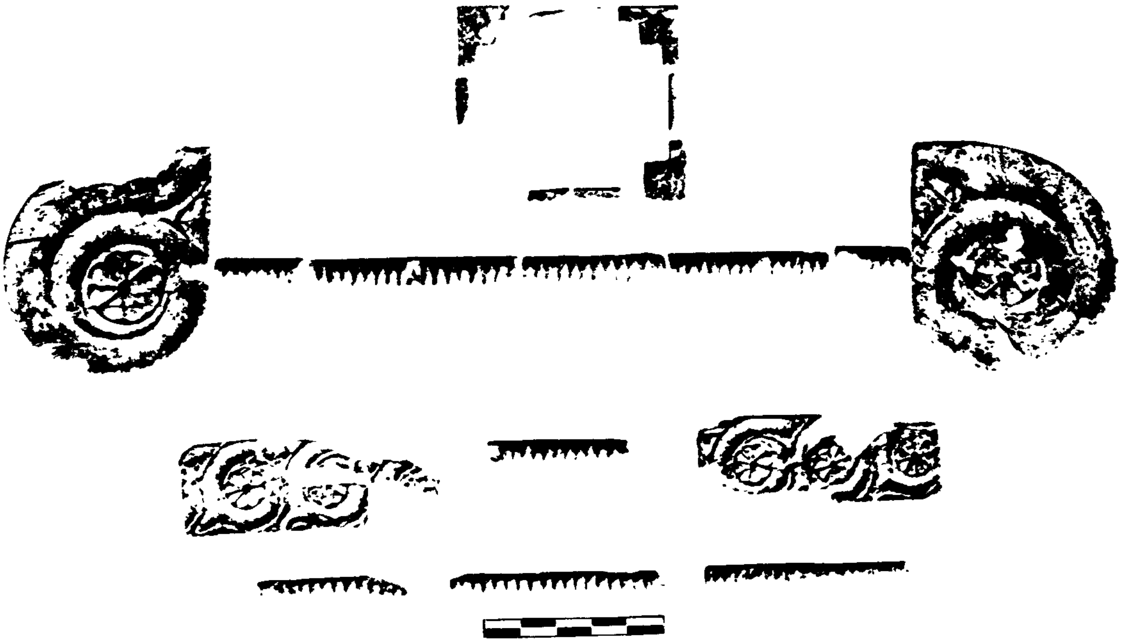
PLATE I


1


2

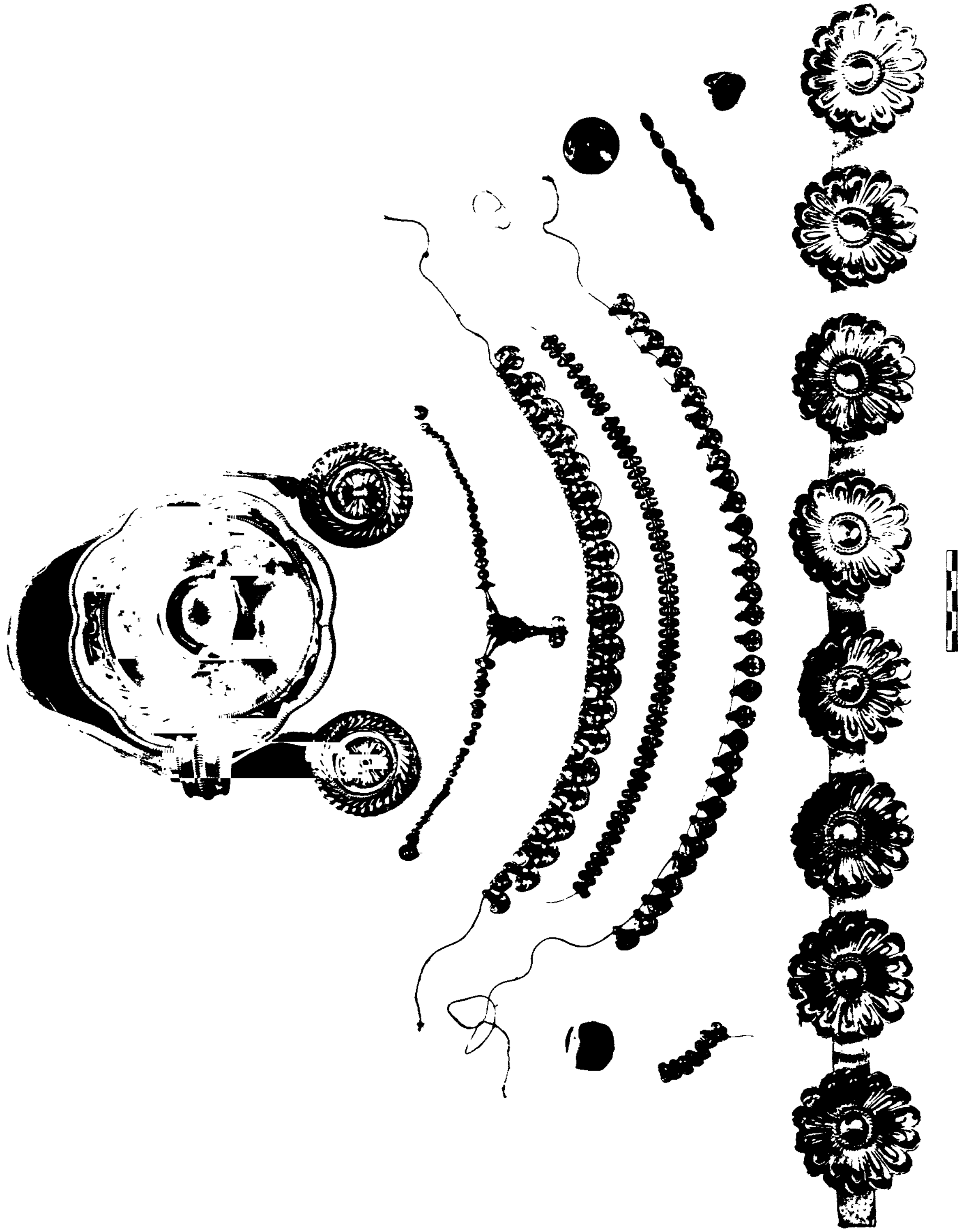


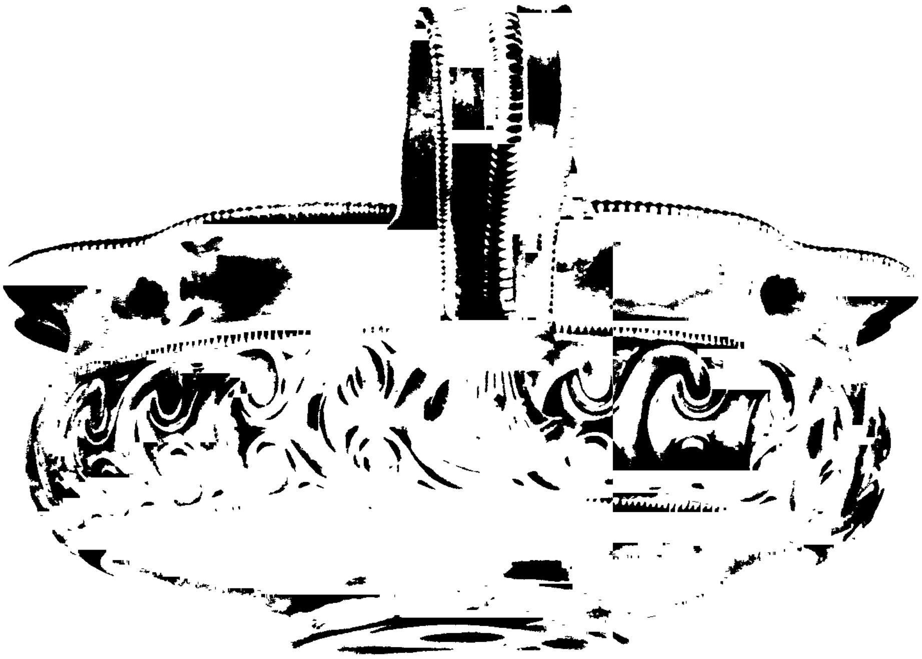
1



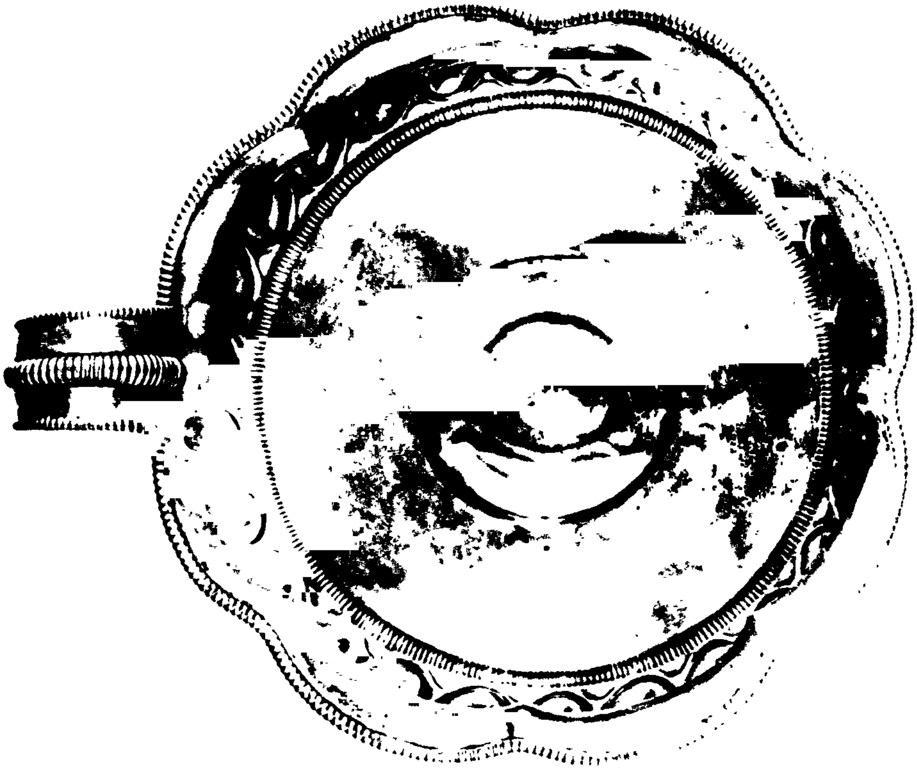
2

PLATE III



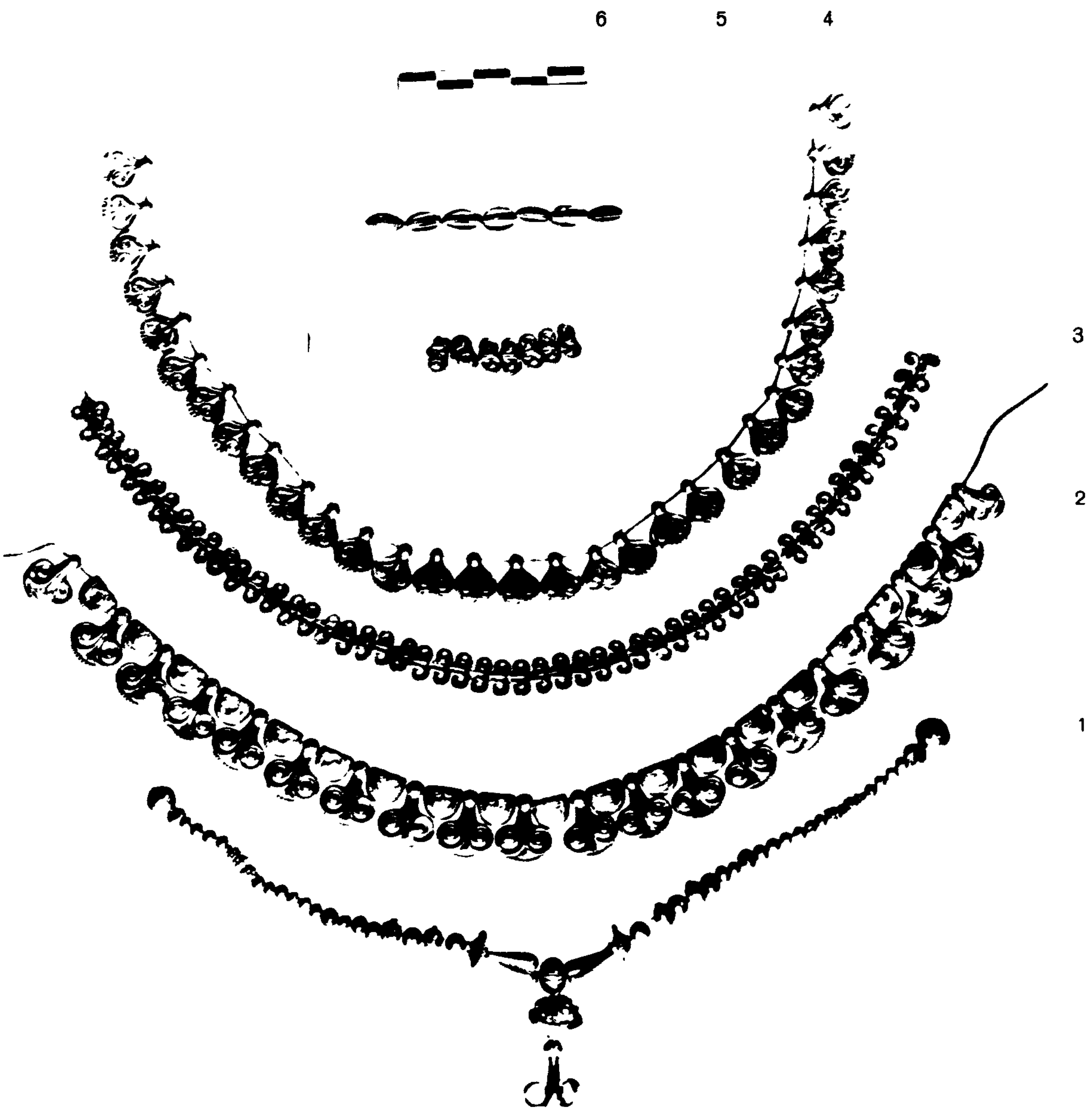


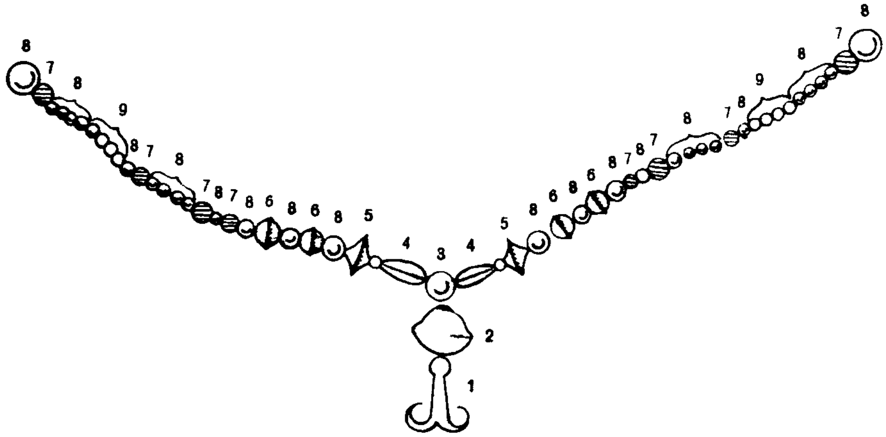
1

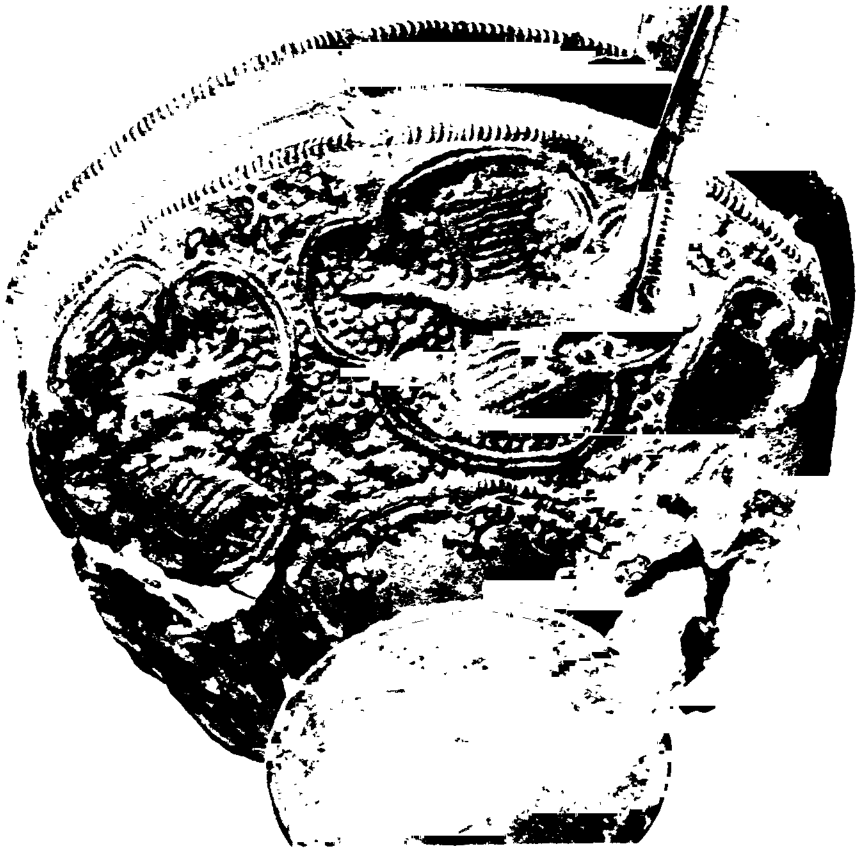


2

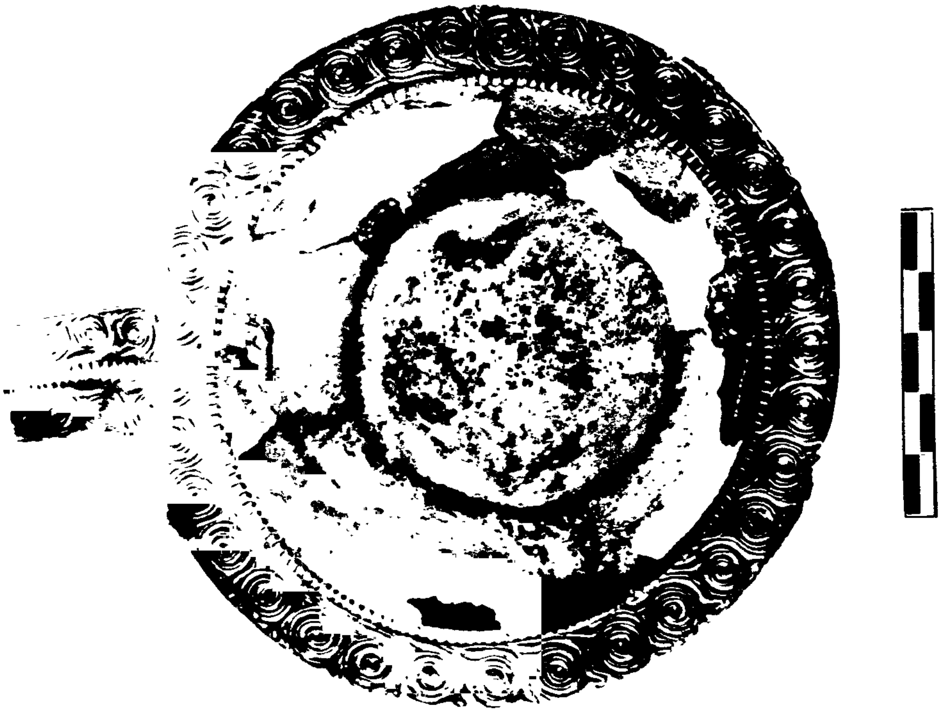
PLATE V







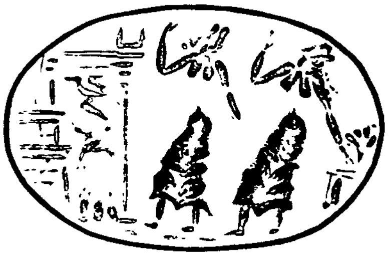
1



2

1 a

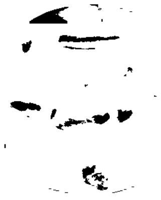
1 c


1 b

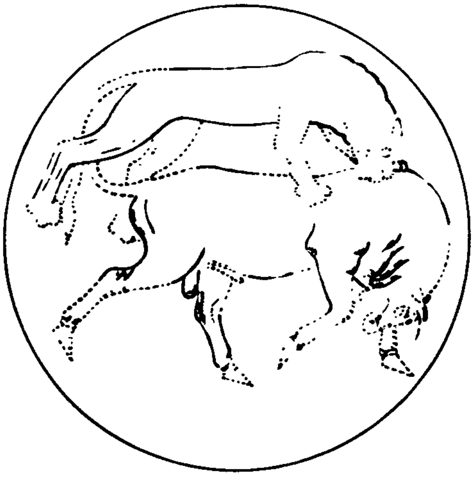
2 c

2 a

2 b


3 a

3 b


3 c

Greece [illegible]

Dendra, [illegible] – Excavation,

Mycenae [illegible] A[illegible] '85

"A book that is shut is but a block"

CENTRAL ARCHAEOLOGICAL LIBRARY

GOVT. OF INDIA
Department of Archaeology
NEW DELHI.

Please help us to keep the book clean and moving.

S. B., 148. N. DELHI.